

Amateur
Prize Winners

(Page 7)

The American **CINEMATOGRAPHER**

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THE AMERICAN SOCIETY OF CINEMATOGRAPHERS was founded in 1918 for the purpose of bringing into closer confederation and cooperation all those leaders in the cinematographic art and science whose aim is and ever will be to strive for pre-eminence in artistic perfection and technical mastery of this art and science. Its purpose is to further the artistic and scientific advancement of the cinema and its allied crafts through unceasing research and experimentation as well as through bringing the artists and the scientists of cinematography into more intimate fellowship. To this end, its membership is composed of the outstanding cinematographers of the world, with Associate and Honorary memberships bestowed upon those who, though not active cinematographers, are engaged none the less in kindred pursuits, and who have, by their achievements, contributed outstandingly to the progress of cinematography as an Art or as a Science. To further these lofty aims, and to fittingly chronicle the progress of cinematography, the Society's publication, *The American Cinematographer*, is dedicated

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The famous Cooke lens is standard equipment. The Filmo 70-DA comes with built-in Critical Focuser at slight added cost. Nowhere else in the 16 mm. equipment can you find the precision, coupled with exact scientific design, that you find in Filmo. The Filmo 70-D, in beautiful Seasmat-locked Mayfair case, comes at \$245 and up. Other Filmo Cameras at \$325 up. B & H pays the Federal tax. See your dealer today or mail coupon.



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PROFESSIONAL RESULTS WITH AMATEUR EASE

More Than 200 Compete for Amateur Prizes

COMPETING with more than 200 contestants from all over the world William A. Palmer and Ernest W. Page of Palo Alto, California, were awarded the first prize of \$500 by the judges in the AMERICAN CINEMATOGRAPHER Amateur Movie Makers Contest when they selected the 3 reel picture "Tarzan Jr." for first honors.

The points on which all pictures were judged were photography, composition, direction, production technique, story, titles, editing, acting and entertainment value.

Based on these values Palmer and Page were awarded first prize. For the 3 reel subject "Tarzan Jr." All of the players in this picture were boys in a summer camp who upon discovering that one of their members has a movie camera decide to make a motion picture.

Like all youth they decide to imitate and base their story on Tarzan. The producers of this worked up a splendid bit of comedy, interspersed a fine piece of melodrama with an Alger Jr. finish that rounded it out into a production that many of the judges felt would have been worthy of showing in any theatre. The acting, direction, story and handling as a whole was considered equal to many a professional comedy.

Second honors were given to Tatsuchi Okamoto of Japan for his 1 reel picture "Lullaby." Possibly the most outstanding features of Okamoto's work were his photography and composition. Many regarded his photography as the finest that had ever been put on motion picture film.

The third winner, S. W. Childs, Jr. caused much admiration for the novel way in which he handled his 1 reel picture "I'd Be Delighted To." The entire picture tells its story with hands and feet. His photography, all of which was interior, was rated very high.

Everyone is familiar with the fine work turned out by the Greenbrier Amateur Movie Club of White Sulphur Springs, W. Va. This club was given the fourth prize for their production "The Black Door," which has been honored in other contests conducted both here and abroad. This organization shows a fine sense of production values and an insight into what is required to build the proper suspense in motion picture entertainment.

More than six weeks were required by the members of the American Society of Cinematographers to go through the 300 pictures submitted in this contest to select the final dozen which were put into competition for the major prizes before the board of judges, announced last month, which consisted of directors, stars, writers, editors, newspaper critics and leading cameramen from the studios of

WINNERS

FIRST PRIZE . . . William A. Palmer and Ernest W. Page, Palo Alto, Calif., for "Tarzan Jr." 3 reels.

SECOND PRIZE . . . Tatsuchi Okamoto, Matsuyama, Japan, for "Lullaby." 1 reel.

THIRD PRIZE . . . S. W. Childs, Jr., New York City, for "I'd Be Delighted To!" 1 reel.

FOURTH PRIZE . . . Greenbrier Amateur Movie Club, White Sulphur Springs, W. Va. for "The Black Door." 3 reels.

WINNERS of Equipment Prizes will be announced in January issue. See page 37 for additional prizes.

Hollywood. This list of judges was announced in last month's issue of the AMERICAN CINEMATOGRAPHER.

With the addition of the prizes given during the past month by the Victor Animatograph Company and William J. German of the J. E. Brulatur Company (announcement of these will be found on page 37) it was impossible for the judges, because of the many entries to decide the winner of the equipment prizes.

These winners will be announced in the January issue of the AMERICAN CINEMATOGRAPHER, together with those who will receive Certificates of Merit for outstanding ability in certain phases of production.

The Certificates of Merit will be given contestants who showed high individual merit in different phases of picture making. Photography, composition and the other elements will be considered under these awards.

These Certificates will represent a very high honor to those who receive them as in many instances they indicate a greater achievement in that individual phase of motion picture making than was perhaps represented in the prize winning pictures in view of the fact that it was necessary to judge the prize winners from all nine points of picture making giving the honors to those who had the highest average for all points, whereas the certificates of merit will represent high achievement in individual phases.

Plans for the 1933 AMERICAN CINEMATOGRAPHER method of making awards will be announced in next issue. The plan to be used will be wider in its scope and cover a wider field of amateur activities. We might say now that this plan will be open to all bona fide amateurs whether they are subscribers to the AMERICAN CINEMATOGRAPHER or not.



THRU the LENS of the CRITIC

WITH the presentation of the 1932 Academy Award for Cinematography to Lee Garmes, the motion picture industry has fittingly acknowledged "Shanghai Express" as the year's finest example of photographic art. It is a nobly deserved tribute to a true artist. Moreover, this year's award is truly representative of the opinion of the camera profession, for the nominations for the photographic award were made by the photographic section of the Academy, and were restricted solely to films made under normal production conditions in the studios—thereby barring films made under abnormal conditions in which the time and expense elements, so vital in regular production, did not figure. By all odds, the 1932 Photographic Award has been given under the fairest conditions yet attained. The only unfortunate circumstance is that there could be but one award rather than three, for each of the three nominees was of a calibre worthy of such recognition. "Shanghai Express," the winner, is perhaps the most perfect example of cinematic pictorialism that has been seen in many years, however, and is especially notable as an instance in which the art of the cinematographer has raised a story of distinctly routine proportions to the eminence of an outstanding picture.

Perhaps the best commentary on Garmes' achievement is the review of "Shanghai Express" which appeared in the *AMERICAN CINEMATOGRAHER* in April, 1932. At that time we said: "Here is a film from Paramount which is deserving of mention as an example of perfect cinematography. Lee Garmes has achieved a notable quality of purely pictorial cinematography. Every scene is a gem of photography pictorialism—perfect in conception, composition, and cinematic execution. In addition there are several closeups of Marlene Dietrich which are literally breath-taking in their sheer beauty. They rank as the best individual scenes of many a year."

"The picture is well directed and excellently acted, but it is above all a cameraman's triumph, for it shows how far superb cinematography will go toward making a great picture out of an otherwise undistinguished story. Together with the photography, the sets and the manner of their dressing establish a remarkable atmospheric effect; long after the story and acting have passed from the viewer's mind, the atmosphere of China—no perhaps the China of fact, but the inscrutable and chaotic China we conjure in our minds after perusal of the latest war-bulletins—will remain."

Little more need be said about Garmes' achievement: he has produced a picture which will long remain as a high-water-mark of sheer cinematic beauty; one which has received the approval not alone of his fellow cinematographers, but of all of the representative artists, technicians and executives in the industry. We congratulate Lee Garmes, and the Academy as well, for having bestowed the award for so richly deserving an achievement.

OTHER ACADEMY AWARDS

The other 1932 Awards of the Academy were also well-

deserved. To the Technical Community, the most important awards, next to the Photographic Award already discussed are those for Recording, Art Direction, and Technical Achievement. The Sound Department of the Paramount Studio once more won the Award for the best recording. Unlike the majority of the other awards, this is for the best overall performance, and is judged solely by the sound technicians. The judges listen to scores from five separate productions taken from the studio's programme and make their decision through consideration solely of the technical excellence of the record. For the second successive year, the product of the Paramount Sound Department was adjudged the best by this exacting tribunal.

The Award for Art Direction went, most appropriately, to Gordon Wiles, well known as a contributor to the *AMERICAN CINEMATOGRAHER*, for his brilliant work in designing the sets for "Transatlantic," which combined the realistic and the pictorial to a marked degree.

The Awards for Scientific Achievement went to Technicolor for the creation of the three-color Technicolor process now in use for Walt Disney's "Silly Symphony" cartoons, and to the Eastman Kodak Company for the perfection of their new sensometer.

The other awards were: Best performance by an actress Helen Hayes, by an actor Fredric March and Wallace Beery, Best Direction: Frank Borzage, Best Production "Grand Hotel," M-G-M, best original story: Frances Marion; Best Adaptation: Edwin Burke, Best Novelty Short-subject: Mack Sennett, Best Comedy: Hal Roach—Laurel and Hardy, Best Cartoon: Walt Disney, Special Awards to Walt Disney for creating "Mickey Mouse."

"THE MUMMY"

directed by **Karl Freund, A.S.C.**

photographed by **Charles Stumar, A.S.C.**

With the direction of "The Mummy" starring Boris Karloff, Karl Freund, A.S.C., makes his debut as a director. We hope that every producer in Hollywood will see this picture, and learn what a great cinematographer can do as a director. For "The Mummy" is not like the average directorial debut. Freund exhibits a sure touch and a mastery of his medium that many a well-established director might envy. He tells his story effectively, intelligently, and artistically. Moreover, he reveals something which is all too lacking of late—especially in pictures of this type: dramatic good taste. He has not oversteered any element, either of horror or anything else, yet he has made the most of all of the eerie, spine-chilling elements provided in the story. Both dramatically and cinematically, Freund's touch is that of a master of his art. He has guided his players in presenting deft, positive characterizations with the minimum of effort, and in the minimum of footage. His cinematic treatment could not be improved upon, there are no superfluous scenes, nor angles nor any superfluous movement of the camera. He has utilized the moving

Continued on Page 50



PRIZE CINEMATOGRAPHER

The greatest honor that can be bestowed upon any cinematographer was given Lee Garmes when Karl Struss, A.S.C., handed him the golden statuette representing the 1932 Award of the Academy of Motion Picture Arts for the best photography of any picture released within the year. Lee Garmes was given this award for his work in "Shanghai Express." Garmes is at the left of the above picture receiving the congratulations of Karl Struss who was the winner of this coveted honor two years ago.



A typical commercial studio equipped for making advertising film in color

Color in Motion Picture Advertising

by

E. L. Dyer, A.S.C.

ADVERTISERS have looked with longing eyes at the motion picture screen for years. They know that to millions of Americans the motion picture was one source of romance, of relaxation—the one means to which they turned for a glimpse of the outside world, the pattern after which they modelled their homes and clothes and methods of living.

Many attempts have been made to utilize this potentially powerful medium. Advertising films have been produced—in many styles and kinds and lengths. A few have been successful—many have been failures. The generally unsatisfactory results were due mainly to three causes:

- (1) The advertiser had no means of knowing how much a film would, or should, cost.
- (2) Neither he nor the producers had any idea how long a film should be in order to insure public acceptance and at the same time tell a real story.
- (3) And even after the film was made, he had no means of knowing where, or when or for how long, it would be shown—if at all.

The causes themselves were due to lack of one basic requisite—organization and until recently this lack of organization has kept the motion picture screen beyond the reach of national advertisers.

In 1930, this situation changed. In that year three of the leading producers of advertising films formed an alliance. These companies, each individually successful in its own operations, with experience ranging from ten to twenty years, had faced many problems and solved them. Each was supplying thoroughly organized motion picture advertising in its own territory. Thus, by uniting they were in a position to offer advertisers this media upon a national basis.

The result is the Theatre Service Corporation's Screen Broadcasts.

Every screen broadcast is photographed in technicolor and the Theatre Service Corporation's M. P. A. Studios in New Orleans represents a cross section of the average motion picture producing unit, not unlike many of Hollywood's own.

Experience has proved that approximately 50 seconds is the ideal screen time, or length for an advertising film. This allows for a well rounded story, and holds audience attention throughout. This may seem to many as being too short but if you have any doubts as to how much of a story can be told in 50 seconds, put your watch on the desk before you and see how much you can tell in that length of time.

There is no question as to when or where screen broadcasts will be shown. Theatre Service Corporation's facilities include exclusive contracts with first class theatre circuits throughout the country. These circuits control well over 2000 theatres in over 1700 communities. In addition there are hundreds of independently operated theatres under contract to exhibit screen broadcasts as part of their regular programs.

There is no guesswork about circulation. The advertiser knows in advance how many people will see and hear his message because they are sold on a basis of actual attendance in the theatres he contracts for.

To sum up the growth of screen broadcasts I will quote a few figures in circulation and territory covered. Screen broadcasts appear as a part of every program in over twenty five hundred theatres in more than seventeen hundred towns and cities east of the Rocky mountains and show to a weekly average of 7,528,000 persons, and the territory is now being developed on the Pacific coast.

Screen broadcasts are booked in theatres the same as feature pictures through the booking department of the company and are made up into reels of not over six fifty foot

Continued on Page 49

New RCA System Minimizes "Ground" Noises

A GREATLY increased range of tonal reproduction, an increased dynamic range with the ability to reproduce sound shadings from the merest whisper to the full ensemble effects of the symphony orchestra, and virtual elimination of extraneous "ground" noises by a new system of masking off the space on the sound track not actually utilized by the sound wave itself, are the principal features of the new RCA Victor "High Fidelity" recording system.

According to RCA Victor officials, film recorded with the new high fidelity system can be used in all types of projectors without any adjustments or changes, and can be counted upon to effect a great improvement in reproduction on even the oldest types of equipment.

The RCA Victor high fidelity recording system employs a variable area, "symmetrical" sound track. Instead of the familiar "saw-toothed" effect along one side of the sound track, the new recording produces a double-edged, symmetrical pattern, with both edges of the sound wave identical in every respect. This is accomplished by the development of a new optical system in which a triangular beam of light is focused on a horizontal opening leading to the sensitized film; so that, as the triangular beam vibrates in accordance with the incoming sound, small and larger portions of its light exposes the film as it moves past the horizontal opening, producing the double-edged effect.

The sound wave image on the developed film is clear and transparent, while the unused portion of the sound track film is left black and opaque. In this way, background noises formerly caused by shadows of grain in the film and minute dirt particles are minimized.

Reproducing speech and music in a frequency range of from 40 to 10,000 cycles, the new high fidelity system provides the widest range of reproduction ever available to the motion picture producer. Some idea of the extent of this range may be had when it is considered that the first sound film did not reproduce many frequencies clearly above 4000 cycles, and that the best sound systems now in use do not provide reproduction above 8000 cycles. In terms of audible sound this means that the subtle overtones, reaching up to 10,000 cycles, which give vitality and realistic timbre to speech and music are now faithfully reproduced.

An adjunct to the RCA Victor high fidelity system is the new "Velocity" ribbon microphone. This new microphone differs radically from ordinary microphones in that instead of the usual diaphragm it utilizes a thin strip of metallic ribbon which vibrates exactly to the velocity of air particles

set in motion by the sound. It is considerably more sensitive than other microphones and responds uniformly to the full range of frequencies from 40 to 10,000 cycles.

In brief a description that is widely used for this new system is that the sound is natural. It has, in other words, come so close to the natural sound as we know it in every day practice that it is hard to distinguish it as being anything different.

Together with this recording equipment an entirely new reproducing equipment has been designed. This takes in several definite changes in its system over the old style of reproducing, although it is the claim that film recorded with the High Fidelity System will show improvement in sound with the use of present reproducing apparatus.

A portion of the new "High Fidelity" system has already been installed in the RKO studios in Hollywood. Several test pictures are anticipated by various studios with the use of the sound trucks equipped by RCA for this purpose.

A short subject "So This is Harra" was made on the High Fidelity equipment by RKO in its entirety. The re-recording only, however, is now being used by that studio on all productions.



Charting sound on piano scale





RIDDLE

ME THIS

What will the cinematography of 1942 be like? What will the cinematographers of 1942 be working with: what will they be doing?

TEN YEARS AGO. In *THE AMERICAN CINEMATOGRAFHER* for August, 1922, Victor Milner, A.S.C., reflected upon the progress made by cinematography in the ten years between 1912 and 1922, and hazarded a guess as to "The Cinema in 1932". The accuracy of his forecast is amazing. He said, in part: "Some time ago a production, photographed in 1912 by Tony Gaudio and featuring King Baggott and Mary Pickford, was exhibited at an open meeting of the American Society of Cinematographers.

"Those at the meeting who viewed the picture realized that, if judged by the standards of 1912, it was nothing short of a master effort. The director and players no doubt had used all the film knowledge at their command. Tony Gaudio had certainly employed everything known to the cinematographer at that time. But the difference between the 1912 effort and the pictures of today (1922) stressed most forcibly the advancement which has been made in films in the past ten years.

If so much progress has been made in the past decade, what, with the art as young as it is, are we to expect in 1932?"

"Will the feature of today seem in 1932 as the 1912 picture does at present?"

"Will we have escaped the glary artificial carbon lights ten years from now? The players who have to work before such lights are surely to be pined. Will in 1932, an amazing amount of equipment still be necessary to light a set as at present? Will we be working with a sensitized emulsion much more sensitive than that of today?"

"Will an actinic Mazda light, screwed in a regular socket and with the addition, perhaps, of a few 'U' tubes (Mercury-vapor), give us a reproduction of lights and shadows as we see them instead of the present exaggerated effect? Picture the cinematographer of 1932 using natural intensors, very often there will be no use of heavy cables and dozens of 'Whirlfields' to run over hardwood floors.

"Picture an actor sitting in an easy chair, reading with a lamp at his side—how much more effective it will be if we could screw in a photographic Mazda lamp and reproduce the soft, mellow color falling from that light.

"The man who puts himself in the position of a prophet places himself in difficulty. Possibly the writer is doing just this thing here, but to every student of cinematography it is more than evident that there must be changes in this art and industry which we are following in the ten years to come just as there were in the ten years we have lived through. We are the pioneers. We have scratched the surface. Great facts and truths remain to be dug up and uncovered. Before we cinematographers who are filming pictures today give way to young men, we will observe changes which the writer has tried to outline here. But in the meantime we must all work hard—very hard.

"The writer hopes and expects these conditions to come

about, and who knows—they may be here much sooner than 1932. We are living today in an age of invention. The picture today can stand a revolutionary change. The public must be given something different and naturally the A.S.C. is looked to, cinematographically, to lead the way."

TODAY.—Various members of the American Society of Cinematographers have been asked "What will cinematography be in 1942?" They have said:

VICTOR MILNER, A.S.C. "I am confident that cinematography will make as great strides in the next decade as it has in the one just passed. While we will probably not encounter any change so revolutionary as the advent of sound, we can confidently look forward to continued improvement in the technique of cinematography—in the materials and apparatus used by the cinematographers. Undoubtedly, the first major development will be the perfection of a truly noiseless camera. That is vitally important, for even the best of today's camera-blimps are heavy, unwieldy affairs, which are a serious hindrance to the entire company. Their weight and bulk definitely slow down the production of pictures, one cannot move quickly from one set-up to another, nor can one take full advantage of many of the possibilities of the cinema, for these huge, bulky blimps are not easily adapted to the making of many effective angle and moving shots. In this connection, it is really amazing how well we have managed under this handicap. But the truly silent camera must come soon. When it does, it will eliminate not only the bulk and weight of today's blimps, thereby permitting better and faster work, but also the necessity for shooting through glass, as we must now. This will in effect give us a faster film, for the additional glass surfaces through which we must shoot today decrease the amount of light reaching the film by approximately 11 per cent.

"Beyond this, I am confident that we will eventually have still faster film and lenses, permitting a further reduction of the light—and lighting equipment—needed to light a set, and allowing us to work with more nearly natural lighting effects. It is entirely probable that within the next ten years natural color cinematography will be brought to a point of both technical and commercial perfection. When this occurs, the cinematographer will be in a position to fulfill the true function of the artist—to hold up a mirror to life itself. For with truly natural lighting, color, form, and movement, the cinematographic artist will have a well-nigh perfect medium with which to work."

HAL MOHR, A.S.C. "It goes without saying that the materials and methods of cinematography are bound to advance in the next decade as they have in the years since 1922. Even with today's fast lenses and super-sensitive film, we are using far more light and lighting equipment than is desirable. In fact, we are in many cases not getting the full benefit of the film and objectives available already, for while super-sensitive film seemed a tremendously fast emulsion when it was introduced, we have become so accustomed to using it today that many of us are overlooking our sets, and thereby failing to realize to the full either the artistic or the economic advantages of fast film.

"As far as equipment goes, the most urgently needed—and therefore in all probability the most imminent improve-

ment—is certainly a really silent camera. To my mind, this will in all probability be a non-intermittent design, for only by suppressing the intermittent movement and its inevitable and noisy gearing, film-slap, etc., can we hope to achieve an absolutely noiseless camera. Such a design will give us definite advantages in increased shutter-apertures as well, adapted to projection use, it will give us better screen brilliance, and greater film-life.

"But I am convinced that the greatest change will take place, not in the equipment and materials used by the cinematographer, but in the actual nature of his work. For many years, the cinematographer has been in truth a Director of Photography. He has left the actual operation of the cameras to the second, or operative cameramen, while he concentrated his attention upon the lighting and cinematography of the scene, cooperating with the director in staging the action photographically, etc. In the future, I am certain that the director and the first cinematographer as we now know them, will disappear, merged into a single man, charged with the responsibility for the visual realization of the picture, and assisted by the present operative cinematographers, and—if need be—by a dialogue director to coach the players in the reading of their lines. The recent appointment of Karl Freund, A.S.C., as a director is a significant step in this direction. Even more so is the success of his first picture, 'The Mummy.' The success of other cinematographer-directors, like George Hill, A.S.C., the late F. W. Murnau, and others, has proven that the day of the cinematographer-director is here. Less sensational, though even more conclusive, is the evidence presented daily in every studio, where experienced cinematographers, teamed with new or incompetent directors, are turning out successful pictures which are in fact directed by one man—the cameraman. When the industry really assimilates this lesson, there will be a rush to appoint the master cinematographers of today as the cinematographer-directors of tomorrow. Then—and then only—will the industry reach its goal of better and more economical productions."

DANIEL B. CLARK, A.S.C. "If cinematography makes as great progress in the next ten years as it has during the past decade, the cinematographer of 1962 will be photographing third-dimensional pictures, in perfect natural color, very probably on 16 mm. film and for television as well as for direct exhibition. At any rate, tremendous improvements in equipment and materials are inevitable, while it is equally certain that 16 mm. is going to figure enormously in the professional field, leaving 8 mm. for the amateur. And far before 1942, I am confident that the wise producers will have recognized the efficiency and economy of combining the positions of first cinematographer and director, and entrusting the making of their pictures to today's great cameramen—many of whom are already doing that work actually, though receiving credit for the photographic work alone. The record of the cinematographers who have already been assigned to directing is ample proof of the value of this policy. When one considers the list of great pictures made by such men—extending from 'Abraham Lincoln,' directed by Phil Rosen, the first president of the A.S.C. and acclaimed as one of the ten outstanding pictures of all time, down through 'The Big House,' 'Min and Bill,' and 'Hell Divers,' from George Hill, A.S.C. to the latest, Karl Freund, A.S.C.'s 'The Mummy'—one realizes that this is inevitable."

KARL STRUSS, A.S.C. "One hardly needs to state that the cinematographer of 1942 will have at his disposal better equipment and superior materials. But essentially, cinematography will be the same as it is today—as it has ever been—we will still be making pictures with light on a sensitive surface. We may have improved methods and materials, we may even be working—directly or indirectly—with television, but the essential principles cannot change. Technically, we will be making photographs of dramatic action. Artistically, we will be making pictures. The cinema-



Riddin' Me This predicts what will happen in 1942. Above shows a present day studio with equipment, below a studio in 1920. Read what is forecast for 1942.



ographer will still be the one who is responsible for translating the dramatic action to the film-strip (this regardless of the materials or conditions of his work, unlike some of the contributors to this department last month, I hold that the cinematographer who does not feel himself capable of handling the artistic and technical problems of both interior and exterior cinematography is not a cinematographer).

"The great question of the future, to my mind, is 'Will the other phases of the industry have caught up with us yet?' It is a recognized fact that the cinematographer has attained a higher stage of artistic and technical perfection than have most of the other members of the studio personnel. I do not believe that there is a single cinematographer in the industry—even those rated as the 'ace' cinematographers of the major studios—who does not feel that his artistic output is closely limited by the inferior material that is put before his lens. That, in a word, he is

Continued on Page 49



with
Emery Muse, A.S.C.

Principles of Sensitometry and Their Practical Application

Part 19

THE general subject of sensitometry has been discussed rather fully in the preceding chapters in this series of articles. The more recent chapters dealt specifically with the methods of exposure, development, and density measurement. Attention was called to the fact that there is at the present time only one exposure device which can be considered a standard and that is the Eastman Type 11b sensitometer. Methods of development and typical negative, positive, and sound track developer formulas have been discussed. Details also have been given relative to the instruments and methods of density measurement. With these mechanical tools and chemical methods at hand it is now essential to show how these are applied in the control of motion picture film processing. It is first necessary to determine the various sensitometric constants, explain what they are, how they are determined, and give adequate interpretation of them. In this and the next few articles of this series this phase of sensitometry will be dealt with. In Figure 19, which accompanies this article, is shown a typical H and D sensitometric curve in which density is plotted against the logarithm of exposure. It has been previously mentioned that density is a logarithmic function. Therefore, it is necessary to use the logarithm of exposure for plotting the characteristic curve rather than the actual numerical value of exposure as expressed in terms of, for example, meter-candle-seconds.

For the sake of clarity it might be worth while to define and explain the term logarithm. By definition a logarithm is the number of times a number (called the base) must be multiplied by itself to produce a given number. Thus the logarithm (or log, as it is more generally written) of 10 is 1, for the first power of 10 is 10, thus 10^1 equals 10. The log of 100 is 2, for the second power of 10 is 100, thus 10^2 equals 10 times 10 equals 100. Similarly the log of 1000 is 3, for the third power of 10 is 1000, thus 10^3 to the third power is equal to 10 times 10 times 10 equals 1000. Hence the log of the number between 10 and 100 is a number between 1 and 2, while the log of a number between 100 and 1000 is a value between 2 and 3. This means, therefore, that the log of a two digit number, such as 89, for example, is 1 plus a decimal fraction, or, to be exact, 1.9494, and the log of a three digit number, such as 345 for example, is 2 plus a decimal fraction, or 2.5378. The

IN THE LABORATORY

whole number of the log is called the "characteristic" and the decimal part, the "mantissa." It should also be stated that the log of a number between 1 and 10 is 0 plus a decimal fraction. In these instances the base, which was mentioned in the definition, is 10, and unless otherwise designated all logarithms are expressed in terms of 10 as the base. Such logarithms are referred to as common logarithms.

Referring again to Figure 19, it will be observed that the values given on the two axes are logarithms and in the values which actually express numerically the meter-candle-seconds evaluation of exposure or opacity. For example, at the point on the log E scale where the value is 2.0 it means that the exposure value expressed in meter-candle-seconds is 100. To use the reasoning given above, the logarithm of 100 is 2.0. In other words, it is 10 to the second power. It was previously shown that density is a logarithmic function by nature of its definition, D equals log O.

It has been proved experimentally that the sensitivity curve of an emulsion when plotted in terms of density-log E, gives a similarly shaped characteristic curve for all types of emulsions. This curve may be divided into three distinct sections, namely, the straight line, which is represented in

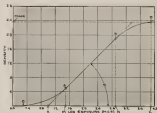


Fig. 19

Figure 19 by the section AB; the toe, represented by CA; and the shoulder by BD. From the shape, slope, and position of these various parts of the curve several of the important sensitometric constants can be determined.

In the next few articles we shall deal specifically with the various sensitometric constants.

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Our New York and Hollywood plants are specially equipped to develop negatives — to render a COMPLETE film laboratory service.

THE old fashioned idea that producers of motion pictures could produce, distribute, exhibit and PRINT their motion pictures has lost millions of dollars to the industry. We have PROVED that the industry needs specialization. We have saved millions of dollars for those producers who have placed their film printing with us.

Specialization has made it possible for Consolidated to develop plans and equipment with a yearly capacity of over a billion feet of "Cathode Prints." We use only the finest raw stock and chemicals — employ only the most skilled operators — measure every process. Quality is CONTROLLED. And we maintain a costly research laboratory to seek further advancements in the art and science of film printing.

Accustomed to the instant demands characteristic of the industry, our highly specialized organization

can operate twenty-four hours a day when overnight delivery is required.

Specialization has established Consolidated Park as the safest place in the world to send your negatives. Our engineers have organized every measure devised for guarding them against every danger. And so well is our organization trained in secrecy and responsibility that the originality of your ideas can never be revealed to inside or public until release date.

Send your negatives to Consolidated — release printing specialists. Relieve yourself of a troublesome and hazardous burden. Only Consolidated with its working capital ample to carry out the largest printing contract, its wide access to its customers and its finance independent production on a large scale, can give you the high quality and speedy service so essential to the profitable operation of every producer.



CONSOLIDATED FILM INDUSTRIES, INC.

NEW YORK



HOLLYWOOD

Oriental Made To Order

by

Cecil Holland, M.P.M.A.A.Head of Makeup Department
Metro-Goldwyn-Mayer Studio

SINCE the inception of the motion picture, the wily oriental has been recognized as excellent dramatic material. Unfamiliar as most of us are with their traditionally inscrutable mental processes, and fascinated by the bizarre atmosphere which they can impart to a picture, it is hardly to be wondered that the producers and scenarists have taken frequent advantage of the colorful celestials. Yet, strange as it may seem, whenever such pictures have been produced, the majority of the oriental parts have been played by accidentals! During the years that I have been in this business, I have seen the production of many films in which one or more of the principal characters was an oriental, yet in only a very few cases have these parts been played by bona fide Asians. Two or three Nipponese and Chinese players have, it is true, attained the position of stars or featured players here. Artists like Anna May Wong, Sessue Hayakawa, and Sanyo Kameyama cannot be forgotten, but they are the exceptions which prove the rule. If you will stop for a moment, and attempt to recall the outstanding oriental characterizations of the past and present, you will find that all of them have been played by men and women of distinctly occidental heritage. Outstanding among them, of course, are the late Lon Chaney, whose characterizations of Chinese in "Shadows," "Mr. Wu," and several other films were perfection itself, Richard Barthelmess, in the never-to-be-forgotten "Broken Blossoms," and, more recently, "Son of the Gods," Alla Nazimova, in "The Red Lantern," Edward G. Robinson, and Loretta Young in "Hatchet Man," and Mynna Loy and Warner Oland in an almost endless list of major and minor parts in many productions. All of these characterizations were convincingly oriental—some of them unfortunately so—despite the fact that the players were actually Europeans. This success was due to a perfect combination of dramatic ability and skilled makeup.

In turning accidentals into orientals, the makeup artist is faced with several problems. First of all, the contour of the face and features must be made over—recast, as it were, in an oriental mould. Secondly, the hair must be altered to a greater or less degree. Third and last, the coloring of the skin must be changed to give the impression of yellowness. In some cases, these changes are very easy, in others, they involve a great deal of delicate work, and result in a makeup which is at best uncomfortable to the wearer, and at times acutely painful.

The actual steps in creating such a makeup, of course, vary according to the individual upon whose face the makeup is being applied, and according to the characterization in question. At present, I have just completed a picture, "The Mask of Fu Manchu," in which the star, Boris Karloff, essayed a Chinese characterization. It was, moreover, a somewhat fantastic conception, Sax Rohmer's malign Chinese doctor—one in which the makeup had to be a



Boris Karloff as "Fu Manchu"

infine exaggerated in order to heighten the implacable malignity of the character.

The first step, of course, was a careful study of Karloff's physiognomy, with reference to its potentially Chinese features—or lack of them. First of all, there were the eyes. In addition to being set in the head at a peculiar angle, a Chinaman's eyes are usually somewhat prominent. Karloff's are, naturally, normal European ones, and inclined to be receding under his heavy, straight brows. Therefore, in addition to suggesting the celestial slant, we must build the eyes up to suggest a greater prominence. This we did by carefully filling in the hollow between the eyelid and the brow. For this we used thin layers of cotton, which we shaped by saturating with collodion, after the desired thickness had been achieved, we finished it off with a surface made of nose-putty, which we were able to mould into the contour which gave us the desired effect, and blended well into the natural conformation of the face. This surface, of course, took the various makeup cosmetics—paint, powder, liners, etc.—quite as well as the natural skin would. To suggest the necessary Oriental slant, we drew the eyebrows slightly up, and, shaving off a bit of the outer ends of each, drew in a shape which gave us both the oriental slant and the "magnifico-effect" necessary for so malign a characterization. The next consideration was the nose. Karloff's nose is naturally more slender and delicately-chiselled than is normal in orientals; accordingly, we distended it with tiny plugs, placed in the nostrils, and likewise built up the outside a little with nose-putty. We next built up the ears with the same material, adding considerably at the top, and making them rather pointed. After that, a villainous, waxy-looking moustache was hung over his upper lip, and a trace of coarse, black hair was fixed in the centre of his forehead, to protrude below the tight-fitting skull.

Continued on Page 43



"ARTREEVES"

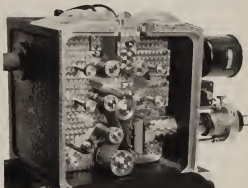
DEPENDABLE

SOUND EQUIPMENT

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Beware of Imitations

Others admit they imitate this equipment they recognize its High Standard. But none has duplicated the perfection of its performance.



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CABLE ADDRESS ARTREEVES

HOLLYWOOD, CALIFORNIA, U.S.A.



● The Bell & Howell Company announces a unit for making on 35 mm film, animated drawings, maps, mechanicals, etc., producing film slide negatives, photographing titles, also copying documents, books, and records — document copying being a new field for the motion picture camera with single exposure device.

The Animation Stand consists essentially of: A B & H Eyemo 35 mm spring-driven camera. A rigid supporting stand rising from the four corners of a horizontal baseboard. A mount for the camera. This mount permits raising and lowering the camera as required by variations in the size of the material to be photographed. Two reflectors for photo-flood lamps. A "single-shot trigger," for exposing a single frame of film.

Provision for simplified centering and framing of subject.

A series of numbers, corresponding to the numbered divisions on the vertical slide, replaces the usual footage calibrations on the lens focusing scale.

The device is readily demountable and quickly reassembled, so that it can be transported.

● THE first equipment to be manufactured in the new factory of Hollywood Equipment Company at 645 N. Martel Avenue was secured by the Gulf Coast Studios of San Antonio, Texas where the Kier & Phillips Productions are made.

● A double purpose lamp has been designed by the Corcoran-Brown Lamp Co. according to an announcement from that concern. This lamp can be used with photo flood or photo flash lamps, also with regular 50 or 60 watt lamps for other uses.

It is designed with a universal joint that permits the tilting of the lamp in any direction. The reflectors are made removable. These lamps are put out under the trade name of "Flectors."

● According to an announcement from Dunning Process Company, that organization has equipped itself to attract the 16mm industrial field to its service. In addition to printing and developing, reducing 35mm to 16mm, it has also placed in an executive sales capacity Elliott A. Allen, formerly with U. S. Steel Corp. to conduct the activities of its Industrial Department.

It is the contention of the Dunning Process Company that with the acceptance of sound on 16mm a more

WHEELS OF INDUSTRY

elastic form of salesmanship is open to commercial companies as well as a new avenue for distribution that will attract many toward this form of advertising.

Dunning has taken on the agency for the distribution of the RCA sound on film 16mm projector. They have also inaugurated a system of distribution through fifteen key cities from coast to coast according to their announcement.

● THE E. Leitz, Inc., announces a new model enlarger which they call the Valley Enlarger. They claim it has more versatility than former models. It is equipped for masks for single movie frame negatives $\frac{3}{8} \times 1$ inch, Leica negatives $1 \times 1\frac{1}{2}$ inches and roll film miniature camera negatives $1\frac{1}{4} \times 1\frac{1}{8}$ inches. It has been equipped with a device that holds the negative perfectly flat during exposure. By means of a lever the film can be pulled in either direction without removing from the plate. The condenser acts as a pressure plate and holds the film firm and flat. It is removable for cleaning.

The lamp house encloses the 75-watt coal lamp which is adjustable as to distance from the condenser. Large cradles are mounted at each side of the gate which serve to hold the film roll while the enlargements are being made.

A ricketed metal pillar supports the lamp house unit. The electric cord is carried inside of the pillar.

Four different paper-holders are available which may be placed upon the baseboard. These hold the paper flat by means of thin metal strips which are adjustable for any size enlargement. The strips also act as masks, to obtain a border around the print.

A special screw-mount is supplied which permits Leica Camera lenses to be mounted in the enlarger. A flange can be supplied which clamps onto the camera lens, taking care of diaphragm adjustments. A ruby filter may be attached which swings directly under the lens.

A magnifying glass, mounted upon a universal joint, can be mounted on the baseboard. It serves to assist in obtaining critical sharpness of the image on the paper.

This firm also announces a service bureau for Leica owners. This department will offer advice, suggestions and answer any questions regarding the use of the Leica camera. A bulletin will be issued every month and sent to Leica photographers.

The service department will be under the direction of Wilfred D. Morgan and Karl A. Barleben, Jr., F. R. P. S.



THE BIGGEST MECHANICAL FACTOR IN TODAY'S MOVIES

EASTMAN Super-sensitive "Pan" has caused such widespread changes and improvements that it easily rates as the biggest mechanical factor in the excellence of today's motion picture. On the foundation supplied by this film, cameramen, directors, actors, and laboratories have been able to build a motion picture art as far ahead of old techniques as movies on the original Eastman "Pan" were ahead of color-blind photography...Eastman Super-sensitive "Pan" finds its fullest possible expression with the gray-backed base on which it is now supplied. Eastman Kodak Company. (J. E. Brulatour, Inc., Distributors, New York, Chicago, Hollywood.)

EASTMAN **SUPER-SENSITIVE**
PANCHROMATIC NEGATIVE (GRAY-BACKED)



HIGHLIGHTS of AMATEUR CONTEST

by
William Stull, A.S.C.

NOBODY left the lens-cap on—but a lot of folks forgot their actors! That is the outstanding impression after viewing all of the hundreds of reels of film entered in the AMERICAN CINEMATOGRAPHER'S Contest. The average advanced amateur seems to be a mighty good photographer, and often a better-than-average director—but he is all too often a very poor film-editor. More films failed through bad cutting than through almost any other single shortcoming. In many pictures, every time a really beautiful scene appeared, the judges found that they could be almost sure to see that scene repeated, with variations, at least five or six times. Here, a slightly different exposure—there, a slightly different filtering—then several slightly different angles. Had the maker been content to show only the original, perfect scene, and cull the others, his picture would certainly be rated higher in both editing and photography. No one wants to see an artist's preliminary sketches; only the finished product is of interest to the world. Much waste is a pair of shears!

The 9.5 mm contingent was surprisingly large. More than half of the entries from Japan were made with this equipment. America's sole upholder of 9.5 came from Iowa.

While speaking of the 9.5 mm. entries, we must commend Mr. Wagono Arai, of Tokyo, who entered a 9.5 mm. animated cartoon. The making of these subjects is a difficult matter for an amateur even with 35 mm. equipment—and Mr. Arai's achievement in turning out so excellent a cartoon on 9.5 mm. is of real merit.

The amateur news film was excellently represented. Worthy of especial note are the entries of Mr. Charles Moulema, "X Olympiad"; M. Charles Rhein, "Exposition Internationale, Anvers, 1931"; and Miss Ruth Rodgers, "Royal Air Force Display," hailing from Hollywood, Belgium and England, respectively.

The standard of photography shown in the better films proved a revelation to the professional cinematographers who formed the special sub-committees detailed to the preliminary judging. More than once during these sessions I overheard men like Victor Milner, A.S.C., or Karl Struss, A.S.C.—outstanding artists in professional camerawork—remark: "I'd be proud to have such photography in one of my own pictures!"

With films entered from England, Australia, Japan, Holland, Rosta, Catalonia, South Africa, Alaska, Italy, Belgium, France, and all parts of the United States, the Contest proved an international affair in more ways than one—for it required all of the linguistic ability of the members of the A.S.C. to translate the titles of the various entries, many of which were in the language of the land of their origin. We hereby single out one of the entries, *Senor Delavre*

de Caralt, and ask him to take a bow for his forthrightness in sending a synopsis of his entry, "Montserrat," and a complete list of its subtitles (which were in Catalan), together with a translation into Spanish and English. Viva El Senor de Caralt!

Of the foreign countries, Japan had the largest representation, with nearly a dozen entries. Some of them were the finest combinations of perfect technique and sheer cinematic artistry that I have ever viewed. The greatest professionals might well be proud of such flawless work. *Banzai Nippon!*

Despite the responsibility entailed in the final judging, the various notable professional artists and technicians who formed the final jury were eager to participate and to see what their amateur fellows were doing. One famous director cancelled a story conference with the author and producer of his next film in order to attend, an equally famous star stayed away from the preview of her latest picture for the same reason. All of them enjoyed the affair hugely. I have rarely seen an audience so completely interested in a program of motion pictures, either professional or amateur.

After the judging, an almost universal subject of discussion was, "What is an amateur picture, anyhow?" How can one compare a true home movie like "A Funny Fable" with an elaborate dramatic production, made with professional technique but by bone fide amateurs, like "Tarsien, Jr." or "The Black Door"? The answer appears to be the decision of the Officials of the A.S.C. to greatly enlarge the scope of next year's contest so that there may be definite awards for each of the many possible classifications of amateur-made productions.

After viewing the excellent aerial sequences in "The Black Door," "Sky Lark," "Air Trails of the Serpas" and "Trail of the Eagle," Elmer G. Dyer, A.S.C., the world's premier aerial cinematographer, admitted that he felt distinctly humbled. "Some of those amateurs did as well with their air work," he said, "that they made me feel like an amateur. Well, maybe I am—I certainly haven't had the opportunity for studying flying camerawork that some of these Air Corps officers have had. I'd sure like to meet those boys—maybe I could learn a few things about using a film in the air from them!"

One of the executives attending the judging was W. J. German of the Bnatour Co., who was so impressed with the technical excellence of some of the pictures that he has asked the permission of the A.S.C. to take the films back to Rochester to show to the executives of the Eastman Kodak Co.

The final determination of the winners of the contest has proved an intricate bit of mathematics, as the ballots throughout the judging were marked according to a point system, giving separate ratings for photography, composition, direction, production technique, story, titles, editing, acting and entertainment value. After watching the clerical staff of the AMERICAN CINEMATOGRAPHER office integrating

Continued on Page 45

Biggest News of the Christmas Season...

CINÉ-KODAK EIGHT ^{\$29⁵⁰}

MODEL 20



cuts film cost nearly $\frac{2}{3}$

THIS year Eastman makes movies an inexpensive gift with Ciné-Kodak Eight, Model 20, for only \$29.50... a genuine, full-fledged home movie camera fitted with a Kodak Anastigmat f3.5 lens, built-in exposure guide, automatic footage indicator, and eye-level finders.

Ciné-Kodak Eight loads with a special 25-foot film, 16 mm. wide. It runs the film past the lens

twice, leaving two separate images along its full length. Eastman finishes this 25-foot roll, slits it, splices it, and returns it as a single 50-foot length, 8 mm. wide—ready to project in Kodascope Eight. For \$2.25 you get movies that last as long on the screen as the usual 100-foot roll at \$6.

Give home movies with Ciné-Kodak Eight, Model 20... in its attractive gift box.

Now... A New

Eight with f1.9 Lens

A new Ciné-Kodak Eight... the Model 60... is equipped with a Kodak Anastigmat f1.9 lens, which is instantly interchangeable with an f4.5 1 1/2-inch telephoto lens supplied as extra equipment. A beautifully finished photographic instrument, its price, including carrying case, is \$79.50.

Kodascopes Eight are priced at \$22.50, \$34.50, and \$75. Your dealer will gladly show them to you.

EASTMAN KODAK COMPANY, Rochester, N. Y.



TREND

of 16 mm. FILM

RAPID strides are being made by the various manufacturers of 16 mm. equipment. Here and abroad a keen interest is being evinced in the future of this market. Sound on 16 mm. film is the target at which many are aiming. Color is another phase that is receiving almost attention. We are offering you on this page some of the developments now under way and others that will be ready for marketing soon.

Victor Animatograph Interested in Color Camera

ACCORDING to various authorities the Victor Animatograph Company have their engineering and experimental department earnestly experimenting with a new camera that will be used for the taking of 16 mm. pictures in color. According to reports the system used will be the cine color of Hollywood.

Germany Open Studio for 16 MM. Users

ONE of Germany's leading supply houses has opened a studio in Berlin for the use of the 16 mm. amateur. It is their intention to open a second studio. This, it is claimed will be completely equipped with all professional apparatus and will have sufficient lighting for a professional

16 mm. film and production. It is claimed this studio will have a floor space of 7000 square feet.

Germany Developing Sound On 16 MM. Film

ACCORDING to press reports from Germany the KLANG-FILM announces that the technical work in developing 16 mm. sound-on-film apparatus has been completed and that the first apparatus will be put on the market soon.

Experiments With 16 MM. in Theatre

AS an experiment, a special matinee was offered in one of Berlin's theatres of 16 mm. subjects solely. It is claimed the technical end of the showing was excellent and the illumination fully up to standard. It is the claim of the reporter that the photographic quality of all the subjects was very fine. While the program was satisfactory, it was not felt that the best could come up to the average of the professional presentations.

Bell & Howell to Make Sound Projector

BELL & HOWELL has ready for manufacture a new 16 mm. sound-on-film projector, having been licensed by RCA to manufacture under their patents. It is expected

Continued on Page 36



No. 58109



35A Filter

GIVE THE GIFT that NEVER Stops GIVING



SUGGESTIONS



VICTOR Comeros

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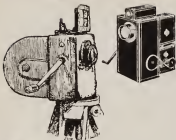
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Forerunners



Upper right the "Kino", upper left "Molella" and at bottom "Molella" camera. All using 17½ mm. film.

THE German firm, Ernemann, A.G., of Dresden, made great efforts to popularize substandard film. In 1903 they introduced an apparatus for amateur cinematography which is doubly notable as it was the first to bear the name "Kino." It consisted of a box measuring 6x4x8 centimetres, which contained the movement, and two detachable metal magazines holding 10 metres (30 ft.) of film each. The film was 17½mm. wide, and perforated in the centre. A claw movement with a pilot pin ensured perfectly steady pictures. The shutter consisted of a drum with an adjustable slot. The lens was set in a rack-and-pinion mount similar to those used in projection-lenses, focusing was direct on the film, while a tubular finder was provided at the top of the box. The camera was hand-cranked, with the regulation one- and eight-pictures-per-turn movements. The takeup magazine was driven by a wire belt.

This narrow-film camera was demonstrated in 1903 before a select gathering of the Dresden City Council, the next public showing took place November 7, 1904, at the Vienna Photoklub.

The first model of the Ernemann single-sprocket movie camera was designed for taking pictures only, with a separate apparatus used for projection. Just a few hundred of this first model were built. In 1904 a second model appeared on the market. It showed great improvement in both the construction and the mechanical design of the apparatus. Instead of the two single magazines a double one was used, and the exposed film was taken up by means of a spring-driven clockwork takeup built into the magazine. This second model could be used for taking, printing and projecting films. The claw movement was replaced by a Maltese Cross, the drum shutter was supplanted by an adjustable disc. Constant sharp focus was insured by the introduction of a pressure plate, which was here used, apparently, for the first time.

This model, like the previous one, was hand-cranked, with 8:1 and 1:1 shafts. The magazine was fastened simply to the camera, as the built-in clockwork takeup worked independently of the camera-movement. A

built-in finder permitted focusing directly on the film, and the lens was mounted in a spiral focusing mount similar to those in use today. When used as a projector, the camera was placed on a special stand fitted with a fixed lamphouse. Like all the projectors of the period, it was hand-cranked.

Another Dresden firm also made apparatus for using the 17.5mm., center-perforated film used by Ernemann. This apparatus was the Kretschmar, and was very similar to the Ernemann model, using a Maltese Cross movement, with pilot pins, 8:1 and 1:1 cranks, and adapted for taking, printing and projection.

In 1912 the French firm, Pathe Freres, introduced a substandard projection apparatus known as the Pathe "K-O-K." For this they introduced a special film, 28mm. in width, with a special perforation—four perforations per frame on one side of the frame, but only one to the frame on the other side. The projector for this system was an entirely self-contained unit. The current necessary for the projection-light was generated by a small dynamo belted to the crank which powered the movement. An ingenious friction-drive took care that the light was constant regardless of the speed of the crank; there was no danger of burning out the lamp through generating too high a voltage.

In 1913 the manufacture of this apparatus was transferred to America. Under the name of "Pathoscope" an improved projector for use with any existing electric-light circuit was marketed, also a camera for photography with the previously mentioned 28mm. Pathoscope film. The Pathe Company also established a considerable library of 28mm. subjects, using, for the most part, reduction prints from the 35mm. productions of the Pathe Studios.

EDITOR'S NOTE. The introduction of this 28mm. Pathoscope System appears to have been motivated less by consideration of economy than by a desire to keep the inflammable, nitrate-base professional films out of the home field, Pathoscope films were coated on Acetate-base "Safety Film." This standard achieved a considerable degree of popularity in American Home Movie and Educational circles up to the introduction of the 16mm. system. In 1918 the Society of Motion Picture Engineers officially recognized two Film Standards: the professional 35mm. standard, and the 28mm. "Safety Standard." The latter was identical with the Pathoscope standard except that it was perforated conventionally, with four perforations per frame on each side of the film. "Safety Standard" and "Pathoscope Standard" prints were therefore interchangeable in projection on Pathoscope machines, but Safety Standard projectors could not, unless modified, use Pathoscope prints. Like Pathoscope film, Safety Standard film was coated on slow-burning Safety Stock. Both systems used the negative-positive system, which was obviously almost as costly as regular 35mm. film, having only the advantage of the lessened fire-hazard.

In 1912 there also appeared the "Ducoscope," which may be termed the simplest and most original of all narrow-film cameras. It produced negatives which were afterwards enlarged on paper, these single-frame paper enlargements were bound together in little booklets, and viewed by rapidly flipping the leaves with the hand, on the principle of the old "Mutoscope." These peep-hole movie books were commercially marketed as "Biorix." The film was 17½

of the Amateur Film

by
Guido Seerber*

Translated by
Hatto Tappenberg, A.S.C.
(Concluded from November)

mm wide, center perforated, but with two perforation-holes between each frame, arranged side by side. The camera-movement consisted of a double arm which moved the film onto and off from two fixed pilot pins. The camera could also be used as a projector, in which case a flashlight battery supplied the electricity for the light.

From Rochester, in 1917, came another camera which showed itself a true ancestor of the present 16 mm. equipment. This was the "Mouette," which used 17½ mm safety film with two perforations per frame on either side. Negative film was used, supplied in a daylight-loading double magazine of 50 foot capacity. The camera was unusual too in that the magazine was placed in the camera at right angles to the axis of the lens, as may be seen from the illustration. The "Mouette" camera was hand-cranked, and a separate mechanism was used for projection. This, too, was hand-driven.

EDITOR'S NOTE: Another interesting camera and projector for this 17½ mm system was introduced about 1918 by the Wilent Instrument Co., of New Rochelle, N. Y. This firm was then a well-known manufacturer of studio cameras. Their amateur camera was known as the "Actograph," and was of truly professional design, with a metal box, fitted with a Bausch & Lomb "Tessar" lens. The camera was hand-cranked, with both 8:1 and 1:1 movements and double outside magazines identical with those now used on professional Bell & Howell and Mitchell cameras, but holding only about 100 feet of film. The magazines were placed on the top rear corner of the camera. This camera was later enlarged and marketed as a 35 mm camera, 200 foot capacity, and known as the "Wilent News Camera." The design was later modified somewhat by the

*Reprinted from "Fortschritt," Berlin.

New York Institute of Photography, and the camera rechristened the "Institute Standard." There are many of these cameras still in use.

In 1920 an Austrian firm introduced a 17½ mm. known as the "Clou," using 17½ mm. film perforated much as modern 16 mm. film is, save that the perforations were round. This little camera had a magazine in the rear, employing a single sprocket for both feeding and taking up the film. The film could be cranked either forwards or backwards as desired. The movement consisted of a heart-shaped eccentric cam. The "Clou" was made to serve as a camera, printer and projector interchangeably.

EDITOR'S NOTE: About the same time, André deffine in Paris introduced his "Septi" camera, a small, clockwork driven hand-camera for 35 mm. film, adapted to make either 7 metres of motion pictures or 250 "stills," single-frame size, at a loading. The "Septi," too, was adapted to take, print and project. It made pictures of excellent quality, and was the forerunner of both the "Eyma" type of cine hand-camera and the "Leica" type of one-film still-camera.

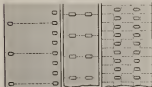
Lisach, a well-known camera firm of Munich, tried with their "Coco" camera to utilize standard 35 mm. film split in half. But for a number of technical reasons, this split-film attempt failed, as had that of Birt Acres several decades previously.

Edison had introduced a home projector which, in point of novelty, deserves mention. It was constructed along the lines of the standard projectors of its period, but used a special 22 mm. film bearing three rows of pictures, with a perforation between each row. After projecting the first row of pictures, the projection aperture was moved over to the next row, and the film cranked through backwards, while the last row of pictures was projected by a third movement of the aperture, and by turning the crank forward again. This was made possible by printing the several rows of images alternately in opposite directions. As the small image required a strong illumination, a fairly powerful arc light was used.

About 1923 Pathé introduced the "Pathe Baby" (known as "Pathax" in America), a projector which used a film only 9½ mm. in width. Later on this firm introduced several 9½ mm. cameras, and established a large rental library. The optical reduction-prints of well known professional films helped tremendously in the sale of "Pathe Baby" apparatus, and secured a wide spread appeal all over the world. **EDITOR'S NOTE:** Although the 9½ mm. standard is but little used in America, it is extremely popular in other parts of the world, especially as it is claimed to be even more economical in operation than standard 16 mm.!

We have already mentioned that the Eastman Kodak Co. imitated the 16 mm. film. With their original "Cine Kodak" (now termed the Model "A"), a relatively large,

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Left, Pathoscope 28 mm. film;
Center, Mouette 17½ mm. film;
Right, Edison Home Movie 35 mm.



Left, present 16mm. standard; Center, 16 mm. before splitting into 8 mm. Right, same film after splitting



Blanche Sewell at her editing table in the M.G.M. studios

Editing is Easy When....

by

Blanche Sewell

Editor, Grand Hotel

ONE of the easiest jobs of editing I ever had was "Grand Hotel." To the novice this may seem strange. "Grand Hotel" with its story fitting through the one location dealing with so many import-

ant personalities would indicate an intricate job of cutting and editing.

But the reason is simple. It has a story, a very complete story. One that was definitely adhered to. The director, the camera and the actors followed the script in close detail. When the picture reached our department we found the camera had done most of our work.

But, of course, that isn't true of all pictures. The one thing, however, that is fundamentally true is that before you can edit a picture you must have a story. You see you are not really editing so much film, but you are editing a story, the same as an editor of a magazine edits contributions that come to him from authors. Therefore, the use of the word "editor" in the film industry.

As writers will ramble along on some phase of their article, giving you unbold detail and over-lengthy descriptions, so sometimes the producer and director are inclined to make certain sequences of their pictures—in other words, they are pet scenes, everyone has them, they visualize great huzzahs coming from the audience when they view them, whereas the usual result is a flat and cold reception that leaves the audiences, in present day parlance, "blah." And by the same token that "pet" scenes are most frequently very boring, follow your first hunch when you find some scene that makes a good impression on you, but which through its many showings and process of editing may become a bit tiresome. Those who see it for the first time are going to receive the same impression from this scene that you had on first viewing it.

You know there is such a thing as tempo in pictures, and also moods. But let's touch upon tempo. It's all important. Your subject matter is going to dictate this. If you have a story that goes along at a good pace it means your scenes must be short, brisk, snappy. Certainly none of them over-length, unless you have an idea of definite contrast that will help lift the following scene to a seemingly greater tempo without actually cutting it too short. But these cases are rare, and would occur in a film very seldom. Too many of such contrasting episodes would change the tempo of your picture entirely and instead of making it the fast moving subject you intended would make it lethargic and not at all the entertainment you had in mind.

There is such a thing as dull footage. Footage that doesn't mean a great deal to the story. Footage that might be very fine photographically, might have something in it which you admire over-much, but which when blended with the whole takes you right back to a "pet" scene, although it was not entered in your mental category as such. With silent pictures such as you make this is a great temptation. We here who have to deal with sound in the studios are restricted in our scenes to the conversation and sound that it contains. We sometimes cannot take out what we might feel a dull portion, as the lines must be finished to give an excuse for the next scene or for something coming later in the picture.

But most amateurs deal with either scenes, or something intimate in and around their homes. There would seem to be no story in this material, but before you can have a picture that entertains there must be a story no matter how slight a thread it may run on. Just a little thought before shooting will give you some sort of an idea for a story, if it is the baby crawling, perhaps he is crawling toward some object, something that has attracted his attention. Here you have a chance to do a great deal of editing with your camera. You show the object he is trying to get. You flash back to the baby eyeing it. You give the long shot showing the distance he must traverse, etc. You have a bit of a story there. You can build up hin-

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BLEND THEM . . .

The Scenic and The Commonplace

by
Elmer Clifton

as told to
Wittred Lucas

LEARNED a severe lesson in the predicting of scenes. A rain had filled the sky with beautiful clouds and we made some interesting views of the clouds. Just for fun we took a shot of some children making mud pies and the mud oozing through their toes. In the final cutting of the picture the two scenes went together so this scene was left in. When the reviewers and the audience entirely ignored the beautiful clouds but went into ecstasies over the mud oozing through the little boy's toes, I realized that nature was a vast subject. It has a myriad of aspects.

Too perfect photography and the choice of only dainty bits of scenery do not truly represent Nature. One must show some of the rough seams on the unlined inside of Nature's gown. One must let the audience see the littered gutters, as well as the clean-swept, garnished Sunday streets.

He would be a very silly parent who would feed his growing child on fudge and cream puffs exclusively. As Langfellow said "Into each life some rain must fall." So there must be cloud and fog and rain throughout the world. There must be contrasts, because each day of our lives is filled with contrasts, and the photographer who goes out with the finest of lenses and the very latest of filters and mattes and gadgets and brings back just a series of beauty shots, has missed the target altogether. His total effect is one of unreality; for even the lowly toad

makes an interesting photographic study in its natural element. Time after time, you will find in the international photo exhibitions, the photographer most likely to win the award is someone who has painstakingly tried to put upon the plate some such subject as a foggy street with a lone silhouette figure as the only suggestion of life.

Our cinema public is avid for scenes of travel—foreign or domestic, but, as I said before, not merely the beauty spots. They demand inside information about the people of these places they have never seen—details of their home life, their social intercourse, their peculiar habits.

The late Alexander Penned who photographed with me around the world was a marvel at cooperation. He was just as interested in photographing a grain of dust as he was in making a masterpiece of photographic art of the Sued-Dagan Pogoda.

Law Physioc is another photographer who has an uncanny knack of catching the unusual. He just finished an expedition with George Allen photographing the "Phantom Sea." Mr. Physioc's technique is the use of a great variety of lenses which enable him to present a story from different angles.

I recently had occasion to ask Mr. Physioc to make some photographic studies that would fit in with a film taken in 1915. A detail like this to most cinematographers would have been impossible as their minds run in accord with the latest ultra films, soft developments, etc. Mr. Physioc, very cleverly, hunted around until he found raw stock a year old, then he used an old-fashioned camera and slow lenses. The result was a perfectly matched picture. The scenes fitted together beautifully. Here is an instance where a man whose vision is guided only by the modern methods would have been unsuccessful.

Dr. E. A. Briggs of the University of Sydney, Australia, has made several trips for me into the jungles of New Guinea, Ceylon, etc. He is a marvel at collecting detail, for he has learned in conducting his classes at the University of Sydney the difficulty of explaining something to an audience. Therefore, he photographs with an explanatory eye. And so your pictures must explain to the cinema public. If they see just a swarming street or a picture of some great temple, no matter how beautifully the scenes may have been photographed, they will get no proper idea of the race who inhabit that street or who worship in that temple, until they have been given intimate, homely pictures of the people and the customs that make those people different from those our public sees in their own daily life.

A picture of a little Mongolian boy kicking a dog will

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The approaching sandstorm is of greater interest than the beauty of the scene





Ann Harding

Learn how to stand and sit gracefully and acting'll come easier

Be Yourself If You Want to Act

by
Ann Harding

DON'T try to be greater than the personality you are portraying. That is fatal. It leads to ludicrous over-exaggerations.

Acting is an instinctive art, something that you do or do not possess. Those who have the spark in them can learn to materialize it in the form of dramatic expression; those who haven't had better pursue some other ambition.

I am assuming that this article of mine will reach those who have experimented in the dramatic arts and who know by this time whether or not they can act.

To those the primary law is, Be Yourself! Speak, walk and sit naturally. Never become conscious that you are in

a play and NEVER think that you are doing poorly, for this leads to exaggeration and affectation.

Over-emphasis is the terror of most great actors and actresses. It isn't needed except rarely and then it can be done only with the greatest skill.

There is no instruction I can give that will teach you how to act if you haven't it in you. Good acting is natural acting. You would consider that person balmy who, in the course of a conversation, punctuated his words with grimaces and exaggerated movements of the hands and body. That is the fault of most amateurs who lose track of the fact that an actor's job is to mirror people you and I know. They are people whose mannerisms and habits you know. They can't be made to appear silly—unless they are comic characters.

For the amateur I would say this. Learn your part thoroughly then stand in front of a full-length mirror and see yourself act that part. You must, of course, be super-critical. Watch carefully against awkward movements of the hands—that bit of self-consciousness that attacks all beginners.

Repeat your work in front of the mirror time and time again until you are sure you are acting calmly and naturally and with composure. Those hands and arms, if you watch them intently enough, will soon take care of themselves. They will lie naturally, will lose their jerkiness and soon you will forget that you have hands.

I can't be too insistent upon this matter of hands and arms. They are an important part of acting. An experienced actor uses them for expression. Notable for the use of his hands is Leslie Howard who was with me in Radio Pictures' "The Animal Kingdom."

Leslie can, I am sure, tell as much with his hands as an ordinary actor can with his voice. He uses them to punctuate his words. He doesn't wave them like windmills, or clasp and unclasp them. But there are subtle movements, little deft touches here and there that characterize his lines and emphasize the message in his voice.

So few young actors and actresses sit down properly that I am going to give a few words of advice on this phase of the art. It would seem unimportant, but if the young player feels stiff or frightened, the act of sitting down becomes one of the most ludicrous things I know.

There really is no excuse for this. Sitting is one of the most frequent and most natural things we do. Then why is it so difficult for an amateur player?

Again we come to the cue-all—"Be Yourself!"

The act of sitting during the progress of a play should be done easily—and comfortably. Sit so that you can rise easily—without the help of your hands—practice this, try one foot slightly in front of the other as you sit down. You'll notice it helps you greatly to rise easily and comfortably. This same posture in standing gives you more graceful lines. Unless you can control the feeling of discomfort you will never become a good actor or actress. It is the lack of comfort, induced by self-consciousness or fright, that will keep you a rank amateur when you might just as easily be a good amateur or a good professional.

On the stage, or in a scene for a motion picture, I forget the fact that I am in a play and that I am representing a fictional character. As a matter of fact, I study that role for weeks, and some times months, until I am that character.

I am the girl you see on the screen, not an actress. The so-called Ann Harding personality doesn't try to overshadow that creature I am personifying. The real Ann Harding may differ in matters of moxie, education and ethics from the

Continued on Page 42

Learn to Listen Well!

Advises

Leslie Howard

ACTING, George Arliss once remarked, is not so much being natural as it is being unnatural without getting caught at it. The physical limitations of the theatre and the screen often force the actor to do things which would seem most unnatural in real life, but which are necessary to a successful performance on the stage or before a camera. The art of acting, therefore, consists more than a little of knowing how to make these necessarily unnatural acts seem natural.

On the stage, for instance, one must—even in the most intimate scenes—project one's voice so that the occupants of the farthest seats in the auditorium can understand what is being said; in a silent film, one must project his pantomime so that it will take the place of the words which cannot be uttered. In talking pictures, on the other hand, between the all-seeing eye of the camera, and the sensitive ear of the microphone, the actor need project neither his voice nor his action. Rather, in fact, he is called upon to restrain them to a degree which, viewed in the light of stage, or silent-film technique, seems unnatural in its very lack of unnaturalness. For this reason, we find that often the best talking-picture performances are those which, in the actual making, seem amateurish in their lack of the theatrical mannerisms to which we of the legitimate theatre are accustomed.

But the amateur cinema player, I realize, is hardly interested in the technique of stage or sound-film acting, for the apparatus with which he works is not yet adapted to the making of sound films. Therefore any discussion of screen acting for the amateur must necessarily be predicated upon the technique of the silent cinema.

The basis of all acting is summed up in "Hamlet's" speech to the players, whom he tells to "Suit the action to the word and the word to the action." In the theatre or in a talking film, this is easy, but in a silent film one must remember that if he follows this precept to the letter, much of his action is likely to be cut out to give place to the printed title that carries his words to the audience. Therefore he must be a trifle unnatural, and perform his illustrative pantomime either a bit before or a bit after he speaks his title; as a rule, the latter is preferable. One must, however, bear in mind that the printed title is going to be inserted, and that it will in a large measure speak for him; therefore, a minimum of pantomime is desirable. The greatest artists of the silent screen—men like Emil Jannings and Lon Chaney—were those who knew their medium so perfectly that they were able to convey the maximum of thought with the minimum of physical effort.

Screen acting is, above all, mental acting. On the stage one can rely to a surprising degree upon vocal inflection; but on the screen—even in a talking picture—the player must make his face and especially his eyes the chief medium of expression. This does not by any means mean that screen acting must be, as the saying is, "mugging." If you will

study the work of the outstanding players of the stage—artists like Chaplin, Jannings, Lillian Gish, Charles Laughton, Janet Gaynor, Mary Pickford, Marie Dressler, or a dozen others one could easily name—you will find that while they make the face and eyes the principal media for their dramatic expression, they do so with marked restraint. There is not so much facial expression as mental expression. Their acting is done primarily with the brain. First of all, they know the inner meanings of their roles. Then they let their actions and expressions reflect that clean-cut mental concept of the characterization. Lastly, their knowledge of the mechanics of acting enables them to preserve the clear physical reflection of their mental characterization, with every superfluous physical movement eliminated.

A clear understanding of the part is indispensable to a good characterization, but in order to preserve this mental picture undistorted, one must have an equally clear understanding of the mechanical aspects of acting. We admire the playing of a great musician like Paderewski or Kreisler, but we would not do so if they had not spent years of arduous work in mastering the mechanics of their art. Acting involves quite as much mechanics, and requires as complete mastering as does music. Incorrect timing or faulty tempo can ruin the playing of a part as completely as they would the playing of a sonata.

Perhaps the most important single phase of acting is listening. There is a great art to listening. The American actor, Joe Jefferson, once described acting by saying, "When I talk, YOU listen—and when you talk, I listen." To the actor, there are volumes of wisdom packed into that sentence, the difference, in fact, between the trained actor and the amateur. The professional player is always a good listener, the amateur rarely is. The most important part of an actor's work does not always come during his own speeches: it is just as important that he continue playing his part while somebody else is speaking. He may have heard the other player's speech a hundred times in rehearsal, and know it word for word—but unless he stays in character, and listens to that speech as attentively as though he were hearing the words for the first time, he will kill both his own work and that of his fellow-player. Listening

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Leslie Howard and Ann Harding both amateur cinematographers, study up a bit on cinema

Don't Make Them Camera-Conscious

Says

Norman Taurog

Director
of "Skippy"

THE essence of directing is the knack of putting people completely at ease, yet at the same time persuading them to do what you want them to do. While there can never be a set of fixed rules for directing, there are many things which common-sense tells us we should do—and quite a few, too, that we should not do.

First of all, know what you want done. Make up your mind beforehand, so that, when you are actually ready to shoot, you will not appear undecided to your actors. With amateur actors, especially, the director should be a real leader—not "the thinker," but "the man who has thought." On the other hand, don't be so wrapped up in your preconceived plans that you cannot take advantage of unexpected opportunities as they arise.

But, just because you have formulated your plans, don't keep them a secret from the people who are to execute them. It won't lessen your dignity to explain to your players what is required of them—to tell them what it is all about, and they will be able to do it far better than they would otherwise. Besides—nobody likes to be classed as mentally inferior. In making a dramatic film, it is always a good policy to sit down and tell the story of the picture to your cast before you start shooting, and then, as you make each scene, be sure that each person knows what is to be done—and why.

There is a vast difference, though, between being sure your players know what is expected of them and rehearsing them to death. This is a point which many directors, both amateur and professional, have difficulty in grasping. Amateur actors especially cannot stand too much rehearsing; constant repetition rubs away the spontaneity of their acting. Therefore, my advice to the amateur director is to confine himself to one or at most two rehearsals. Then, if anything is not as it should be, he can say, "Well, that was pretty good. Now let's try it this way," and do it over again, with the players once more filled with enthusiasm. But—don't try it too often on the same scene!

In all of this, remember to be calm, don't get excited—and don't shout at your actors. It doesn't do any good, and often irritates and worries them. Besides, it destroys the impression of competent leadership which is the director's greatest asset.

For the same reason, tell your people what to do rather than pushing them into place. Actors are human beings, and should be treated as such; even in directing animals, you can't get natural results if you are constantly shoving your subject around like too much inanimate clay.

If you can't explain your point verbally, step into the actor's part and show him what you want him to do. On the other hand, in working with children, this is exactly the wrong thing to do, you must rely entirely on verbal explana-

Norman Taurog, winner of Motion Picture Academy of Arts & Sciences Award for the year 1951



tion and the child's innate dramatic instinct. I have directed a number of pictures (such as "Skippy") with casts largely composed of children. In making them, I have found that if I attempted to show the child what I wanted him to do, I would not get what I wanted, for he would, monkey-like, imitate me. Instead, for instance, of getting Jackie Cooper as "Skippy," I would get Jackie Cooper's imitation of Norman Taurog as "Skippy." It is a far too common fault of all of us to underestimate a child's mental capacity, yet if a child knows what is to be done in a scene, and understands why, his natural sense for the dramatic will enable him to do it—and often better than any adult could possibly foretell. Remember, one of the most deeply rooted of all human instincts is the instinct of self-dramatization. In grown-ups, it manifests itself in the desire to arrive oneself in more or less exotic masquerade costumes and lodge regalia, in children, in the thousand-and-one dramatizations of play. Have you not noticed, in the play of your own

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Story-Human Interest-Action....That's A News Picture!

Says

C. J. Hubbell

West Coast Manager
Fox Movietone News

A NEWSREEL cameraman is essentially a reporter. The fact that he works with camera and microphone rather than with notebook and pencil does not alter this in the least; he is still a reporter, and he must "write" his stories according to the same requirements that apply to newspaper copy. A news story must first of all be news; it must contain human interest and novelty; it must be told briefly and clearly; and—in the case of the newsreel—it must have ACTION. In this respect, the addition of sound has not altered technique, though it has broadened our choice of subject-matter greatly.

News subjects offer the amateur movie-maker a perpetual opportunity to make films that are "different"—films that his friends will not yawn at, but to do this successfully he must adopt the technique of the professional newsreel man. By this I do not mean so much the professional's photographic technique as his reportorial technique. Newsreel photography is as a rule straight, commercial photography, for there is comparatively little opportunity for high pictorial artistry. It is, in fact, the type of photography that the average amateur is turning out all the time: technically satisfactory, even, clear and sharp, with good, straightforward composition and filtering, but relatively little attempt at pictorialism. Yes, the amateur who has passed beyond the novice stage need have no fears about the purely

photographic problems of newsreel camera work. But he has much to learn about camera-reporting.

Next, news pictures must tell their story completely and briefly. The picture itself must tell the story as much as possible without the aid of titles other than the inevitable introductory title. They must tell that story quickly, without any surplus footage, for no newsreel issue runs over 1000 feet (the equivalent, that is, of the 400 foot reel of 16 mm.), and that thousand feet must contain from five to seven or more COMPLETE stories. The newsreel reporter who shoots a lot of surplus footage is usually out of a job before he even starts!

News pictures must, as a rule, be gotten quickly. News events, like wars, wait for no man. Therefore the news man must be able to work fast and accurately. There can be no retakes at an explosion or fire! First, learn what your lens or lenses will cover at any given distance. Practice setting up and moving your outfit about so that you are accustomed to getting into action quickly. If you use a tripod, do as the professional does: extend one leg a half-inch or so more than you do the other two, and keep that leg in front. Then all that is necessary for a quick move is to take each of the other legs in your hand, put your shoulder under the head of the tripod, and walk off. When you reach your new set-up, lean over until that longer front-leg of the tripod reaches the ground, bring the other two legs back until the camera is level—and there you are! In doing this, by the way, it is a good idea to have the joints between the tripod-legs and head fairly tight, so that the legs can't flap around too freely.

There is scarcely a subject that can't be improved by the selection of proper backgrounds. If you can make them artistic or significant with relation to the subject of the story, so much the better. At any rate, see to it that there is nothing in the background that will distract the attention of the audience from the foreground-action. Also, it will often help if you can choose a background that offers some definite tonal contrast with the subject in the foreground.

Always get a little higher than your subject. When we wish to see a parade to the best advantage, we climb up on a box or take to a second-story window. Do the same with your camera—but don't go too high! The biggest parade in the world wouldn't be of much interest if seen from the top of the Empire State Building.

Also, always photograph a parade coming toward you. Let the people or floats do the moving; too, for it is seldom good to attempt to follow a section of a parade. Besides, with the large shutter-apertures commonly used in 16 mm.

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The Prince of Wales, negotiating that royalty he sees, carries his own camera.

Putting "Teeth" in Your Pictures

by

S. H. McAfee, D.D.S.

Here's Dr. McAfee's set up, the little and representing the patient



FILMING of most any surgical procedure presents certain inherent difficulties. In an operating-room all photographic paraphernalia must be sufficiently out of the way, and unobtrusive; the photographer should conform, as nearly as possible if not wholly, to operating-room routine—wear sterile gown, keep out of the way, touch nothing in the room—except his equipment and possibly the floor. Camera, equipment, lights and 'scenery' cannot be shifted around at will, nor the "actors" bowled out through a megaphone by a director, nor can any "test" shots of the actual operation be made beforehand, nor any scenes therein "repeated" for better photography, or an account of bad acting.

Reasonable precaution must be taken that no electric plug, wire, switch, connection, light or anything else, produces any appreciable "arc" or spark, as there is some possibility of gas explosion. For this reason I would say the use of any form of arc light would be contraindicated in a small operating room during such anesthesia.

I will briefly describe the making of a recent picture entitled "Surgical Preparation For A Maxillary Artificial Denture And The Denture Placed."

'Locale'—Small surgical operating room in a local hospital.

'Scenery'—Patient lying on operating table, head somewhat elevated.

'Action'—Administration of general anesthetic by special tubes-in-the-nose method permitting open, unobstructed mouth, removal of several remaining teeth, surgical reduction of bone interferences, curving, smoothing, suturing, etc. Later scenes showing the finished case, also scenes of the patient's face and mouth conditions, X-rays prior to operation, plaster casts, etc.—were all filmed afterwards in to the moving picture ad lib.

Lighting—One 500 W. Kodalite on stand, 5 feet elevation, 6 feet distant at left, one 1000 W. Kodalite on the opposite side, 7 feet elevation, 6 feet distant, these for general lighting, one 500 W. Eastman medical spot-light (principal source) 8 feet distant, slightly to right, focused on the patient's face, giving a bright circle of light slightly larger than the face and lighting up the INSIDE of the mouth. These three lights, all portable and adjustable, were connected by their rubber covered cables to near-by plug-in wall sockets, first making sure the house line would carry the total load—which was not excessive. There was a large window back of the camera which admitted daylight, varied continually by floating clouds. With ample artificial

light such changing daylight had best be eliminated—otherwise the exposure would need slight variation—a troublesome procedure in such a set-up. However I did not eliminate it, did not vary exposure and no doubt the latitude of the film and the reversal development machine took care of it.

Camera Set-Up—A substantial table large enough to hold steadily a Bell and Howell tripod, at full height, was placed on the floor at the foot of the operating table; a Filmo D-A Camera (with turret and critical focuser) and BGH alignment gauge were mounted on the tripod. This placed the camera about 8 feet from patient's slightly elevated head, and the camera at sufficient elevation to bring the axis practically vertical to the plane of the 'scene' or field of operation. The cameraman stood on a box back of, but not touching the table.

Lenses used—One inch f 3.5 (focusing mount) for a few general shots, and a 3 1/4 inch f 3.3 telephoto (focusing mount) for taking practically all of the operating procedure.

Everything was set up, tested, the view approximately 'found,' lenses approximately focused, exposure determined with photometer, before the patient was brought in the operating room.

We previously agreed that the patient was best kept as nearly as possible in the same position, and as to about what we were going to film. The cameraman, being a dentist, familiar with the procedure, helped some. The patient was then brought in. The camera was now exactly framed on the mouth, (VF alignment gauge position) moved over to critical focus position on the gauge and the two critically focused on the actual scene. The camera was then shifted to the lens position on the gauge (which is about 3 1/4 inches to ONE SIDE of the view-finder on my Filmo camera) and, while not essential to do so, with the camera in LENS position I carefully looked through the view-finder and set up an 'imaginary' centre, which, of course was about 1 1/2 inches to the left of the lens' centre. This imaginary centre happened to be the corner of the patient's mouth. If the camera setting on the alignment gauge is correct and the works not moved, it isn't necessary to look into the view-finder while filming—and I seldom did; just carefully touching the camera button when necessary. If you DO look in the view-finder don't make the mistake of centering with the finder, otherwise the picture, taken at that distance, will be off-center to the right—especially so with a telephoto lens. The camera should be carefully rewound at every opportunity and operated without mov-

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Imagine My Embarrassment—or Mistakes I Have Made

by
Franklin B. Skeele
Amateur

YOU may recall the Japanese lad who collapsed within a few feet of the finish line in the recent Olympic marathon classic. I sat within a few feet of him, posed for as perfect and dramatic a shot as ever registered on my camera's retina. Newsreel photographers would have paid a good sum for such a "scoop." But—imagine my embarrassment to find that the projected film showed twenty feet of my left thumb. It was such a simple thing to do! But it did happen and the incident is gone forever because I did not form the habit of holding my camera properly.

Then there's the chin-type picture which cuts off the top of our subject's head. Most of us know that with close-up portraits we should aim slightly higher than from a distance. But, it took many feet of good film to impress this simple error on my conscience.

Every roll of film we buy contains a slip warning us about panning. Yet we all do it and probably always will. My mistake has been that I went too fast instead of going at a turtle's pace. If done on a tripod much of the objectionable screen vibration will be lessened. Too, it's only natural to "pan" from left to right for that is how we read. Occasionally I wanted the top of a tall building and found it better to "pan" down again, rather than leave my audience in mid-air. By rehearsing every panorama before pushing the button it helped to make me realize that I must go slower.

In reviewing some 6000 feet of amateur film recently, the most common mistake, aside from unpardonable panning, was in not taking scenes long enough. A diver,

for instance, posed gracefully, dove, but the button had been released before he hit the water. One good rule to follow is to be always complete the action, whether it's a foot race to the finish or a high-jump over the bar.

I have found that short shots tend to change the tempo of my theme. They are necessary at times just as is the short crisp sentence in a climax.

I used to wonder why friends lost interest in my showing and made "talkies" among themselves in a supposedly silent masterpiece. Then I began to reason that although the mechanics of lighting, filtering, composition and angles, had been fairly well taken care of, there was no logical sequence. Come to think of it, I had never cared much about reading stories myself without a theme, why then should my friends "ah" and "oh" over my dramas without plots.

Here is what I showed them when they yawned: a group of typical summer beach scenes. The youngsters were diving in the surf. Junior was shown on the end of the pier with his pole. Then a seagull shot followed with one of a fishing boat and a filtered sunset scene.

Re-arranged it ran—One of the youngsters scratched the title on the sand. Then several scenes of their playing in the surf helped to introduce the setting. One of them came up from his dive and was made to remark with a sigh, "Help! I've lost my ring." Then as others were shown diving they were made to appear as though looking for it. Even the seagull scanned the beach for the ring as did the boatmen. The sunset here gave a chance for the day to close logically. "The Next Day" brought us to Junior's scene on the end of the pier. Up comes his catch and he finds the ring (previously planted in the fish's mouth). The plot is simple and perhaps child-like, but at least it gave an excuse for the scenes and brought a smile from the audience.

I find that it is not always convenient to arrange a theme for every roll of film. Yet it is good to have some excuse for combining a series of unrelated shots. By making a News Reel with explanatory titles, the problem is solved.

Some of my best pictures have been dug out of scrap film that been put away by mistake as *rig*. In one instance it happened to be a series of my youngsters from baby-carnage days, through roller-coaster-hood and now through school days. The only extra scenes necessary were a series of the family taken on the front porch looking through the old family album. I took some thirty feet of this to stir in at intervals for variety in the theme to follow. Projected, it shows the book being opened and as its pages are turned the scrap-film shots are injected. A close up of a cake with one candle saves a title; two candles follow in proper place, etc. This is a picture that can be added to as the years roll by, for it is a sort of "unfaded symphony" and will mean much in future days.

I used to explain everything with titles. It was a mistake. In fact, it was like telling a joke to someone and then explaining the point. Instead of saying "Early Next Morning" so and so" I learned that a milk bottle on the front porch indicated the same thing. "Three Hours Later" became more interesting by showing a clock with the hands turning the hours. Subtle suggestion often gives my pic-

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The shot shows the man is just the author's thumb.

Cylinder Distortion for Special Effects

by
Dr. J. S. Watson, Jr., A.S.C.

SITUATIONS arise in motion picture taking which suggest the desirability of a device for distorting the photographic image. Perhaps the composition of a view does not quite fit the proportions of the camera aperture. The camera itself does not have the adjustments of the still camera. A more suitable angle of view cannot be found. Yet the scene would look better if it could be spread laterally, so that there would be less space at the sides, and compressed vertically, so that more was included at top and bottom.

This would be a highly respectable reason for using cylinder distortion. The slight increase in the apparent breadth of trees or mountains in the scene would probably not be noticed, and art would continue to conceal art in the good old way.

There are, however, photographers who would be more than willing frankly to exaggerate certain features of the subject if they could. To such unscrupulous persons cylinder distortion offers many opportunities for special effects. Buildings, waterfalls, model scenes, and even actors can be made to take on new proportions, and appear more threatening or more ridiculous, as desired. Even the movements occurring within the scene can be emphasized. The swaying of branches in a strong wind is more alarming if magnified laterally or diagonally along their line of travel. Storm waves appear more dangerous if magnified vertically.

Cylinder distortion devices have long been in use. There is a very ingenious cylinder system on the market for producing amateur wide films. Several years ago the Bell and Howell Company introduced a cylinder attachment for their Filmo camera. It was called the 'Lens modifier' and was extremely powerful, being intended for word or comic effects. It is convenient, however, not to be limited to one power, as each new situation generally requires something a little different from the last. The device described in this article is easily made up in different powers. It is intended to be used directly in front of the regular lens of the camera.

The principle of a simple cylinder system is the same as that of the Galilean Telescope. A plus cylinder occupies the objective position, while a minus cylinder of greater



A 35 mm. enlargement of a cylinder distortion picture

power takes the place of the telescope eye piece, as close as possible to the camera objective. The axes of the two cylinders must coincide and so must their focal points, the separation between the lenses being the difference in their focal lengths. The magnification produced is equal to the focal length of the plus lens divided by the focal length of the minus lens.

With these facts in mind it is easy to calculate any type of system desired.

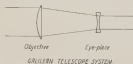
Focal length of plus cylinder	=	100 mm
Focal length of minus cylinder	=	50 mm
Lens separation (distance between two cylinders)	=	100 mm - 50 mm = 50 mm
Magnification or distortion produced	=	100 ÷ 50
		2

Systems giving magnifications of two and more entail disadvantages not found in weaker systems. If strong lenses are used, increase of aberrations prevents a sharp image from being formed on the film. On the other hand, if weak lenses are used, the separation between the lenses must be increased and the objective lens, situated at the front end of a long tube, embraces only a narrow angle. In other words the device will cut field on any but a very long focus camera lens. Cylinder systems with magnifications up to 16 and separations of about 50 mm. give satisfactory definition and should not cut field when used in front of a 1 inch lens on a 16 mm. camera.

The easiest cylinders to obtain are probably the standard spectacle lenses of about 47 mm. diameter, which are stocked by optical wholesalers in a great variety of powers. The powers are stated in diopters (D); one diopter being the reciprocal of a focal length of one meter. A 10 D lens would have a focal length of 1/10 meter or 100 mm.

The tube that holds the cylinders should be adjustable for length and should permit one of the lenses to be rotated with respect to the other. This is necessary in order that

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John Arnold, A.S.C., amateur cinematographer for Metro-Goldwyn-Mayer Studios, finds he can duplicate many things with the amateur camera that he senses with the professional equipment.

It's Not Just the Camera!

by

John Arnold

President American Society
of Cinematographers

THERE seems to be a large group of amateurs who feel that the reason they don't get good pictures is because they haven't an elaborate camera-equipment; or that, conversely, the reason why the professional gets fine photography is because he uses a \$10,000 Bell & Howell or Mitchell studio camera. To all of which the only possible reply is a polite variation of the phrase, "applesauce!" It is the man behind the camera that counts—not the box itself. Some of the finest still pictures ever hung in a salon have been made with box-brownies; some of the most superb cinematography that I have ever seen was revealed in one of the prize-winning films of the AMERICAN CINEMATOG-
RAPHER'S Contest—made by an amateur with the simplest of home movie cameras. By the same token, I have seen men who didn't know take the finest cameras out—and

bring back films that an amateur would be ashamed of. It's all in the brain of the man at the crank!

Cinematography can never be reduced to a cut-and-dried set of rules. The manufacturers of our amateur cine cameras have come as close to it as is possible, for their cameras are so cleverly designed they can almost think for the user—if he will let them. But even the best cameras and the most detailed instructions can't provide against all of the unusual situations an enthusiastic amateur can run up against. Take, for instance, the problem provided by a girl in a red dress, photographed against a dark green background. Normally, both the dress and the background will appear dark—almost black—on the screen. How are we to separate our foreground and our background? The simplest thing is to change one or the other—but that can't always be done. So let's see what a professional cameraman might do when faced with such a problem. The first and most obvious thing is to use a filter which will lighten the red dress to a pale grey, without having an appreciable effect upon the leaves. Panchromatic film (either regular or SuperSensitive) and a red filter will do it nicely. With Regular Pan, use a B-A filter, with SuperSensitive, a 29-F—and the deed is done. But, unfortunately, if we lighten the dress in this one scene, and don't (or haven't!) in the other scenes in which that same dress figures, we will have gotten out of one difficulty only to get into a worse one. So, what else can we do? Why not put a light outline around the dress and the girl? That will separate her from the dark background very effectively. Here's how we do it, simply have the light come from behind the girl, and have the lens of the camera well shaded. Simple, isn't it? And very effective, pictorially and otherwise. If we want to do it really well, we can use a couple of reflectors to throw some more light onto the dark side of the subject—the one toward the lens, in this case—giving us a lighter subject against a dark background, with a striking rim-lighting around the subject.

Now, on the other hand, say we have too much contrast in our picture. What can we do now? That depends upon the kind of contrast we are faced with: very often, if the contrast is principally one of color, a green filter—the 56-B or one of the new X series—will soften the contrasts considerably; if, on the other hand, the contrast is primarily in the lighting, the various neutral density filters will tone the harsh contrasts down appreciably. It is often a good policy to use a color filter and a neutral density filter in combination. I very often use a K-1 filter and a 50 Neutral together, (with Panchromatic film) on my own films. The new B-N-S and S-N-S filters, which are merely the familiar Aero 1 and Aero 2 filters combined in each case with a 50 Neutral Density filter will do approximately the same thing on SuperSensitive film.

There is another question amateurs are constantly asking me—and every other professional cinematographer: "How can I get night-effect scenes by daylight?" Again the answer is, "with a filter!" If you are using regular Panchromatic film, simply combine a 23-A and a 56-B filter—and underexpose. The degree of underexposure is something that depends upon the effect you wish, for by this rather extreme over-correction, and wisely modified exposure, you can get a range of night-effects running from that of a bright moonlit night to the darkest pocket you can get night-effect scenes by daylight!" Again the facts can be had with a T2 (Gamma) filter. And—a word to those who use the negative-positive system. Tell your laboratory man you are shooting for night-effects, otherwise he will more than likely force the development of the

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Next Month . . .

Home Made Gadgets
Things That Will

by Dr. S. H. McAfee
Interest the Amateur

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Imagine My Embarrassment

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turbs a touch of professionalism such as stamping feet to imply anger, lip locking to symbolize silence.

I used to think that the making of titles was only for advanced amateurs. Since, I find as much pleasure in this as in pushing the button itself. Negative film costs about one sixth as much as regular positive film. By drawing with black ink on a dull white card, I get the reversed effect intended, e. g., white lettering on a black background. Negative film requires a slightly greater exposure due to its slower action. A S. S. lens, with two ordinary 110 volt lamps for right use, should have the aperture at 3.5. If the card has too glossy a finish, the letters will not be sharp and clear. By taking away the light a fade-out is easily secured. Also be sure to give instructions to have the film developed only, otherwise the laboratory will make a regular positive and negative print.

Another early mistake of mine was to make Will Rogers once sat on horseback watching a polo game nearby. I took 20 feet and it might just as well have been Joe Bush for no features were visible. With a little nerve I would have caught that famous smile that the world loves to see and my audience would have enjoyed watching him chew gum. A good photographer has to go pious, be kicked out occasionally, edge to the front of every crowd and not be afraid of "too man's land." After all, your audience wants to see everything that happens, to be close to the scene just as though they were there instead of you.

I used to think dealers sold film and equipment only. Rather their business is to help you find more enjoyment of the film they sell to you. They are experts, will give many suggestions and save you many feet of wasted pictures, which at six cents per foot is only good business.

One last mistake—and important, don't think as I did that you could keep up on movies by simply reading books. Such magazines as "The American Cinematographer" should be studied regularly. You learn of the latest short cuts, of developments of the industry, receive many final suggestions for the improvement of your pictures.

There are few hobbies that offer such an opportunity for originality and self expression as cinematography. "You push the button," but the man who does the "rest" can only develop what happened when you did the "pushing."

Tread of 16 MM. Film

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this projector will be ready for the market early in 1933, simultaneous with the announcement of the RCA and Kodak 16 mm. sound-on-film cameras.

Eastman Developing Sound Camera

EASTMAN Kodak Co. has developed a 16 mm. sound-on-film camera using the newly adopted S. M. P. E. standards, which is in the process of issuing out the kinks prior to "tooling up" for production. This camera is licensed under RCA-Victor patents as well as the subsequent projector Kodak will no doubt produce.

Udole Sam Goes Sixteen

THE U. S. Signal Service have recently completed two sound productions at their Washington D. C. studios. The subjects were Training in Chemical Warfare, and were filmed as silents at Fort Monmouth, the sound accompaniment being done in Washington. Captain A. H. Jewry, U. S. A. Signal Corps, directed the production, which deals with practical war problems and use of chemical gases in warfare. Arrangements are being made to distribute these film on 16 mm. size sound on the film standard to the various army post of eight army corps areas.

MORE PRIZES ADDED TO AMATEUR CONTEST

ADDITIONAL prizes totaling a little more than \$1,200 have been added during the past month to the AMERICAN CINEMATOGRAPHER Amateur movie makers contest.

Contributions from the Victor Animatograph Company of Davenport, Ia. add \$1162.50 in equipment and two cash prizes given by William J. Germain, vice-president and general manager of J. E. Brulaur, Inc., distributors of Eastman 35 mm. film add another \$50.

Detailed description of these equipment prizes which now total more than \$2000 are as follows:

VICTOR ANIMATOGRAPH CORPORATION will present a Victor Model Five Camera, complete with F 2.9 1" Hugo Meyer Lens and No. 5 carrying case for the film which, in the opinion of the judges would most nearly qualify for a major prize except for insufficient photographic quality, it being understood that the lack of photographic quality resulted, not from carelessness but from the type or condition of equipment used, either 16 mm. or 9 1/2 mm. It is further specified that the film receiving this award shall not have been awarded any other prize. Value of this prize \$202.50 for the best film from each state in the United States not awarded other prizes, the Victor Animatograph Corporation will give a \$20 certificate of credit which may be applied to the purchase of any new Victor camera or projector up to and including January 15, 1933. These certificates of credit will be honored by all authorized Victor dealers. Total value \$960.

WILLIAM J. GERMAIN (J. E. Brulaur, Inc.) will give a cash prize of \$25 for the picture having the best composition. He also gives a cash prize of \$25 for the picture considered the most ideal home movie, total \$50.

Other equipment prizes which have already been announced are as follows:

BELL & HOWELL COMPANY will present to winners who have made their pictures with a Filmo 1st—A choice of a Filmo TODA camera listed at \$280.00 or a Filmo Model J. L. Projector listed at \$298.00. 2nd—Choice of Standard Cooke Telephoto Lens, values \$60.00 to \$95.00.

EASTMAN KODAK CO. for finest example of photography in any out-of-doors picture whether it wins cash prize or not and without consideration of story subject. A Model K Cine Kodak, with a f 1.9 lens complete with carrying case, priced at \$150.00.

MAX FACTOR MAKE-UP STUDIOS will present one of the famous Max Factor Make-up Kits, completely equipped, to the winner of first prize.

HOLLYWOOD FILM ENTERPRISES, INC. offers to the person or Amateur Club located in California, who enters the best 16 mm. or 9 1/2 mm. picture from California, regardless of whether it wins cash prize or not.

A Model B Cine Voice, Home Movie Talking Picture Machine complete with carrying case, priced at \$129.00. May be attached to all projectors.

HOME MOVIE SCENARIOS, INC. To winner of first prize, one scenario (choice), one HMS Mathe-box, choice of any HMS filter and one HMS scene slate. To winner of second prize, one HMS mathe-box and choice of any HMS filter. If first prize picture is made from an HMS scenario they give an additional cash prize of \$100.00. If second prize picture is made from an HMS scenario they will give an additional cash prize of \$50.00. If third prize picture is made from an HMS scenario they give an additional cash prize of \$25.00.

METEOR PHOTOLIGHT COMPANY will present the winner of fourth cash prize the following equipment: A Meteor Double Photolight complete with 500 Watt Neon bulbs, retail price \$30.00. A Meteor Photolight Tripod complete with Neon bulbs, retail price, \$18.00. Meteor Photolight Table model, complete with bulb, retail price, \$13.50.

CERTIFICATES OF MERIT. Certificates of merit will be issued by the AMERICAN CINEMATOGRAPHER to those individuals who showed outstanding accomplishment in the different phases of motion picture making. These will cover the entire range of angles involved and in addition a certificate for what will be considered the Ideal Home Movie. In many instances these certificates will be awarded to individuals whose work will have indicated a greater achievement in that particular endeavor than was displayed in some of the four prize pictures.

It was felt by the judges after viewing many fine pictures and discovering a high degree of efficiency in the different angles of picture making as was displayed by many that this contest should go beyond the contest nature and reach out so as to give credit for individual merit. To do this the Certificate of Merit was devised. These Certificates of Merit represent the greatest honor that could be bestowed upon any amateur coming as they do from the camera masters of the world, the American Society of Cinematographers.

NEXT MONTH we will publish in detail the arrangement for next year's awards. The manner in which the awards will be given and their nature. While the complete plans have not been matured the indications are they will be broader in scope so as to take in all phases and classes in their recognition.

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Don't Make Them Camera-Conscious

Continued from Page 37

children, that a child almost never plays as himself, but always impersonates some other character—an Indian, a fireman, a cop, or a gangster? "Tom Sawyer," always dramatizing himself, whether as a Crusader, an accomplice at a noble prisoner's evasion, or as a steamship, is typical of childhood's dramatic urge. The wise director is the one who will take advantage of this in making movie-making a joyous game for children, and who knows how to free the same impulses of adults from the inhibitions of convention.

But, despite this inborn dramatic instinct, children—even such talented ones as Jackie Cooper—will sometimes sulk, and feel that they "don't want to play." In that event, the promise of some reward is often a powerful inducement. But—if you promise a child something, keep that promise no matter what happens. For a child never forgets a broken promise. If you tell him, "If you do this for me, I'll give you a penny—or a nickel—or an ice cream cone"—live up to your word! If you don't—if you break faith with him once, he'll remember the broken promise the next time, and refuse to play. I suppose I have directed as many children as any other man in the industry, and with equal success; half of that success, at least, is due to the fact that, no matter what happened, I never permitted myself to make a promise that I did not fulfill. Often, during the making of "Dippy," for instance, I would tell the children—Jackie Cooper, Bobby Coogan, Jackie Searl, Mirra Green, and the others—that I would give a dime to the one who gave the best performance that day. And how they would work for that dime! A dime was something that they could understand—something that was their own, apart from the hundreds or thousands of dollars a week which they received, but which their parents handled for them.

Up to a certain age, children are practically oblivious of the camera; then they suddenly become aware of its presence. And there is nothing more disappointing than a camera-conscious child. With the amateur, the remedy is a telephoto lens. If you can add to the telephoto lens a remote-control, your problem is even easier, for you can set the camera up on a tripod, some distance away from your subjects, carry the remote-control with you, and then, in the guise of a rehearsal, get your scene. The plan isn't such a bad one, either, when working with adults—particularly camera-shy ones. Try it!

Speaking about children, I've noticed that many amateurs (and some professionals) make the mistake of dressing children up in miniature adult attire, and making them do imitations of adult stunts and actions. To my mind,

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this is bad. It robs the children of their greatest asset—naturalness. It makes them look and feel ridiculous. The best child pictures, whether they are shifts or movies, professional or amateur, are the ones which present them as children, doing the things children naturally do in the way that is natural to children. I have taken hundreds of Graflex stills and many 16 mm. reels of my own baby, the best of them are the natural, unposed ones. These are the most characteristic, and it is such little poses, expressions and movements which show our children as they really are, that we parents really want. To position with the shift, posed "baby portraits" and "baby movies" that show the form but not the character!

Opinions differ as to whether or not the amateur director should confine himself entirely to directing, or handle both that and the photography. In most cases, I believe the latter to be the happier arrangement. It is inevitable in the making of family films, and, except in the case of very large groups, by far the most efficient in handling group or club productions. The man at the camera usually has a better idea of what should be done, and how, than anyone else in the group, accordingly, he is the natural one to undertake the duties of directing the production. If his ability is not equal to the task, it is hardly likely that he would be equal to handling either of the two assignments individually. By the same token, if the amateur director is not familiar with the use and requirements of the camera, he is in grave danger of making many of the blunders made by some of the professional directors who came to Hollywood from the stage with no appreciation of the nature of motion picture making, and the amateur director does not have the benefit of a trained, picture-wise staff of cameramen, assistants and actors, as does the professional. Therefore, by all means, let the amateur director be the photographer as well.

But, whoever he is, or whatever he undertakes, the amateur director should remember this above all else, as soon as the players in any film evidence any trace of camera-consciousness or direction-consciousness, the director has failed. For no matter what sort of a film it may be—whether it be merely a record of the baby's first steps or the most pretentious of dramatic productions—the secret of success is complete naturalness. And it is the director's duty, first, last and always, to see to it that everything that appears on the screen is natural—to put his actors at ease from the start, and to keep them that way to the finish.

A

Blind Them . . .

Continued From Page 27

arouse a throng full of people far more than the finest scene of the Victoria Nyanza—and if it is followed up with an intimate shot of a gorgeous palace, in a corner of which a ragged, hungry Chinese girl is peering a scrawny lotus, the audience reaction will be far greater than anything the name of Chichen Itza could create in them. What I am trying to say is that the pictures which our audiences "eat up" are those wherein the comic and the commonplace are so blended that they create an illusion of real, living, breathing people set down in the midst of their proper surroundings, on whom the audience has sneaked up and is getting a forbidden glimpse at first hand.

But don't let any aspiring amateur, or professional cinematographer get the idea from my words that he must go away off into remote countries to find interesting subjects. They are everywhere.

All you have to do is to find out how to tell these things so that the audience will never even smell the castor oil—will never suspect that it is being educated against its will.

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Continued from Page 34

the final adjustments of separation and axis may be made with the device in position on the camera. A simple mount consists of two short pieces of brass tubing of about .45 mm. diameter, one of which fits fairly tightly inside the other. The lenses are attached over opposite ends of the combined tube with tape or retaining rings. A rough adjustment may be made by simply looking through the tube at some object and rotating one of the lenses until the scene appears sharp. The device is held in the optical axis of the camera lens by an extension arm similar to that used for the sun-shade. Theoretically the camera lens should be set at infinity, but often a different setting sharpens the image. With the axis of both cylinders vertical, magnification is produced in the horizontal dimension of the image, and vice versa.

If the point of focus in the scene is nearer than 25 feet a spherical auxiliary lens should be attached to the front of the plus cylinder. This keeps the system afocal and gives a sharp image for near objects. The focal length of the auxiliary lens should be equal to the working distance. Thus if the object to be photographed is 6 1/2 feet from the cylinder objective, an auxiliary lens of plus 0.50 D (focal length 2 meters) is used.

A set of cylinder distortion devices ranging in magnifying power from 1.2 to 1.5 will meet most requirements. More convenient is the variable magnification device invented by Mr. Scott Sterling in 1928. This will give any degree of distortion from 0 to 2 by simply turning a handle on top of the mount. The degree of distortion can even be changed continuously while the camera is running an effect which is at the least peculiar. This device unfortunately is rather complicated and difficult to adjust, but the two element system described should offer no special difficulties to the amateur. Here are some formulas giving different magnifications:

For magnification of 1.5

plus 8.00 D

minus 12.00 D

Lens separation = 41.67 mm

For magnification of 1.66

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plus 5.00 D

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Forerunners of Amateur Film

Continued from Page 25

bulky and expensive camera, they led the victorious march of substandard film. Very soon after the introduction of their original Model "A," they offered far more improved apparatus.

EDITOR'S NOTE 16 mm apparatus was actually introduced almost, if not quite simultaneously by the Kodak Co., Bell & Howell and Victor. Mr. George Beyer of the Victor Animategraph Co. has, in fact, informed us that Dr. Victor's first 16 mm "Animategraph" antedated the Cine Kodak by several months. This first "Animategraph" was a redesign of a previous 17½ mm model, and was box-form, hand-driven, with a fixed-focus f 5.6 lens. At any rate, it is incontrovertible that the Cine Kodak, the Filmco and the Victor were the first 16 mm cameras and appeared so close together in 1923-24 that it is very difficult to definitely state which was the first.

In 1926, when the 16 mm Cine Kodak size had already conquered considerable ground, Pathe reappeared with a new film, called the "Rural." It is 17½ mm wide and makes an especially economical use of the film surface. This film maintains a monopoly in the French educational system.

But there is still no standard—and if any of us thought that 16 mm would prove the final standard for amateur cinematography, we were badly mistaken. Several years ago the Kodak Electric and Manufacturing Co., a large radio concern in Cincinnati, Ohio, produced an apparatus using 16 mm film, but which quarters the film, thereby saving approximately 75%. The mechanical movement of the camera and projector not only move the film vertically, but horizontally as well.

EDITOR'S NOTE For a complete description of the Kodak system, see THE AMERICAN CINEMATOPHIL, November, 1929, also Vol. I, CINEMATOPHILIC ANNUAL. This system, while extremely interesting in theory, appears to have lapsed into desuetude due to numerous technical deficiencies.

Strange as it seems, the Kodak Co. has recently taken a somewhat similar step—and gone even further. They offer now an 8 mm film which is obtained by splitting the 16 mm film in the middle, after the exposure. During the exposure only one half of the 16 mm film is exposed, after the film has gone through the camera once, it is turned over and the other half exposed. After processing, the 16 mm film strip is cut lengthwise, and spliced end-to-end, creating an 8 mm film strip perforated on only one side. This 16 mm film, however, has twice the number of perforations that ordinary film has. It is a strange coincidence, the first narrow film for the amateur was made by dividing standard film—and now after nearly four decades the 16 mm film which has conquered the world is itself divided to form a new amateur standard. This has been made commercially and technically possible, however, only as a result of far-reaching progress in photo-chemistry, optics and cinematography. The 8 mm image does not show any grain, is perfectly sharp, and the projection as steady as the standard 35 mm film.

As we have seen, substandard film is still in a state of flux. Our space has permitted the mention of only a few of the more outstanding narrow-film systems which have actually matured, without digressing to consider the many others which have never progressed beyond the stage of discussions, patents or experiments. However, substandard film is definitely here, for both the amateur and the professional. Regardless of any future developments, its present importance cannot be doubted, its future is unquestionably secure.

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Editing is Easy When . . .

Continued from Page 26

chances, surprise and finally achievement that will give the hardest hearted person in your audience a kick just to shoot the baby crawling on the floor means nothing. Perhaps to you, because you are the "proud parent," but not to anyone else. Putting a bit of a story in it you are going to find a greater pleasure in achieving a better subject and at the same time you have the history of your baby crawling.

There must be an idea, there must be a story, no matter how slight before you have a picture, because after all a motion picture is a story written in pictures instead of type.

The close-up is an important part of a story—not to be over-done of course, and not to be under-done. You are coming to climax of a situation, you can give it no greater punch than a close up. You might work up to it from a distant shot, to a three quarter, possibly back to the distant shot again and then into your close-up for a fine dramatic effect. The mixing of these scenes takes more than just the desire to use certain shots you have taken. It takes judgment. It takes a sense of the dramatic, of what entitles, of what the reaction of the human being will be. They cannot be used according to a certain formula. They must be handled judiciously, wisely and effectively—but they must be used. As a general rule the amateur picture contains too few close ups, possibly because they have not been taken. So take close ups. Remember—they can not be added in the cutting room if they have not been taken.

A close-up projects that character, that piece of business right out into your audience. It becomes a part of them. They cannot get away from it. It fills the entire screen, they are conscious of nothing else in that picture, but that piece of business that character, or the emotion you wish to convey.

A great deal of your editing can be done with the camera itself. This will depend in some to a greater degree than others. We even find it among the professional cinematographers. Some of them watch their exits and entrances which are important in a story such as the studios make. Others are not so inclined to give these close attention. The best cameramen make the jobs of the editor easier, make for better pictures, a finer piece of entertainment, perhaps that is the reason they are great cameramen.

In view of the fact that editing is the last step in the offering of a picture, I am sure that if I were to expose film I would first have something very definitely outlined, as complete a story as I could conceive—and conceived with the camera in mind, so that when the job of editing came around, I would have the proper material and material that would logically fall into its place. Learn to let the camera do a great deal of your editing.

Be Yourself

Continued from Page 28

girl on the screen. The two may be as far apart as the two poles, yet that makes no difference.

For the duration of that picture Ann Harding merges into the character of another and attempts to make her natural and understandable in the light of her own experience and ability. That is how all acting is accomplished. You visualize the character of another and render it honestly, believing in mind that to do so you must be honest with yourself.

Again I say, don't try to be greater than the personality you are portraying. That is fatal. It leads to these ludicrous over-exaggerations. I warned against.

If you want to learn the art of acting try being yourself. It really is the only advice worth the giving.

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Listen to Listen Well

Continued from Page 29

may well be compared to fencing. The slow-motion camera shows that there are three distinct motions to a thrust with the sword: first, the sword is pointed, second, the arm extended, third, the lunge itself. These three phases actually blend smoothly into each other, and occur so quickly that to the eye they appear like a single movement—but each move must in itself be complete and perfectly executed. It is the same in acting: first, one hears what the other player is saying, second, he considers it, third, he delivers his reply. If the action is to be natural, it must—no matter how quickly it is performed—include these three phases of hearing, reaction and action.

The amateur actor is prone to forget all this, and to consider acting as merely a matter of delivering his own speeches and pantomime effectively. He is in character as long as he is actually speaking or doing something, but as soon as the action shifts to someone else, he slips out of character and becomes merely a man waiting to begin acting. Such playing will spoil the finest scene ever written—no matter who the other players may be. And if good listening is important on the stage or the audible cinema, it is vital in the silent film, where the audience's attention is concentrated upon the action rather than upon spoken words. The next time you go to the theatre or to the cinema, study the way the players listen to each other. The greatest actors are invariably fine listeners.

There is a subtle distinction, of course, between listening well and listening so exaggeratedly that one interferes with the work of the other player. It is possible to listen so demonstratively that one attracts the attention of the audience from the speaker, and causes them to miss some important words or actions. This is "bad theatre"—and bad manners as well. Yet I doubt if the average amateur is in any great danger of falling into this pitfall. Far better, at any rate, for the amateur to listen too well than not well enough.

Another important factor is timing. A good actor is able to tell as much by his pauses—or timing—as he does by his actual words and acts. The amateur actor all too often merely rushes through his lines, oblivious of the eloquent pauses that a professional would employ. It is not always what you say so much as how you say it.

Still another important consideration is to make the audience do part of the work. No audience that either the professional or the amateur is likely to face has so low an intelligence quotient that it must be shown everything. Even children appreciate appeals to the imagination. The actor's problem, however, is to differentiate between legitimately appealing to the imagination and underplaying his part; sometimes this distinction is very finely drawn. In one situation, turning one's back upon the audience may be the crowning artistic touch; in another, a consummate blunder. To the amateur, therefore, I would say, when in doubt—overact. The amateur does not have the years of experience with audiences that the professional can call upon for guidance. The amateur, once he has mastered the physical requirements of his role, and understood the mental ones, had best cast aside all inhibitions and "let himself go" completely. There is little danger that he will let himself go so completely that he will over-play his part.

Tempo is a rather intricate matter, but one which the actor must master. If you will study performances of the same play by two different companies—one professional and the other amateur—you will find that one of the most essential differences in the two performances is that of tempo. The professional eliminates waste movement, and keeps the play moving along quickly and consistently; the amateur is likely to do a lot of unnecessary work, which slows down the tempo, and makes it jerky. The professional tempo is almost invariably faster than that of the amateur.

Moreover, different types of drama require different

Continued on Page 46

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Learn to Listen Well

Continued from Page 44

tempo. So do different characterizations. Boris Karloff's characterization of the Monster in "Frankenstein," for instance, was played at a very deliberate tempo; while his portrayal of the Racketeer in "Night World" was paced very much faster. Lee Tracy's recent portrayals of newspaper reporters—especially in "Blessed Event"—are noteworthy examples of ultra-rapid tempo.

Changes of tempo are often valuable in highlighting certain dramatic moments in a characterization. Charles Laughton's interesting character-study in "Devil and the Deep," for example, was played chiefly at a fairly deliberate pace, but the dramatic climaxes were highlighted by abrupt outbursts at a decidedly accelerated tempo.

The actor's greatest aids are good direction and thorough rehearsal. Very few actors are able to direct themselves, the best guarantee of success is for the actor to place himself in the hands of a capable director—and then work willingly with him. Such delicate matters as tempo, timing and grouping demand the detached perspective of someone who is able to see the action as a whole rather than as an individual performance.

Rehearsals should be considered not as something to be merely walked through anyway, but as a laboratory where one can analyze and refine his performance until everything superfluous is eliminated, and all that is essential brought out in its perfect proportion.

Above all, remember "Havilet's" advice: "Suit the action to the word and the word to the action." Nor do not see the air too much with your hand, but use all gently, for in the very whirlwind of passion you must acquire and beget a temperance that may give it smoothness."

▲

Putting "Teeth" in Your Pictures

Continued from Page 52

ing—or re-adjusted by the grips if moved—and certainly after re-loading.

Starting with the 2 inch lens a general shot of the beginning of anesthesia was taken. At 8 feet the 2 inch lens gave a small view of the patient and included the anesthesiologist's head, arms and much of the immediate surroundings. But a 1 inch lens at 8 feet picture would have been entirely too small to show the details of operation. At the proper time the 3½ telephoto lens (previously critically focused) was carefully rotated to film position, and the filming continued without even looking in the finder—which of course would be necessary if relative positions had not been changed by either moving the camera or the "scene."

The 3½ telephoto lens at 8 feet gives a picture of the

patient's face that nearly fills the frame (and of course the screen) making the smallest details of the operation quite large and clear—in fact the small black suture threads are plainly seen on the screen.

With a telephoto lens ESPECIALLY there must be no "jiggle" or movement of the camera otherwise the picture will jump all over the screen. Any close-up, and especially telephoto work, can only be well done on a tripod with alignment gauge, or the equivalents thereof.

I used Super-sensitive film on the picture described. With the lighting described the photometer said f 6.3 which meant f 8 for the super-sensitive.

I used no specially made equipment in the operating room but did so at home in filming in convenient ad lib, several still photos of the patient's face and mouth conditions before the operation. Also home-made equipment for filming in the dental X-ray negatives by trans-illumination and for greatly magnifying and filming them singly. Also an arrangement for rotating, opening and closing plaster casts of the case while filming without showing anything except the white moving casts against a black background. This was all done at odd times at home—on home-made apparatus. Subsequent "shots" of the patient and the finished case were taken in my office operating room by practically the same technique as used in the hospital.

In order to make the "still" pictures of the patient look "less still" a piece of card-board was set up edgewise against the outside of a Sinnerman developing coil. The still photos were set around against this, framed with black paper, the coil revolved slowly on a pivot on the table top and filmed turning around, back and forth. This made each picture large enough and the several in quick sequence for comparative observation.

Details of "ad libitum" shots taken at home.—

A full set of the patient's dental negatives (previously made) were arranged on a piece of ground glass, closely framed with black silhouette and illuminated from behind with two photo-flood lamps, concealed from the camera by a large 28x42 inch black show-card board with a hole cut out to disclose the ground glass and X-ray negatives. This showed all of the pictures about as the dentist examines them. Each X-ray negative was then mounted separately, framed in black, trans-illuminated and filmed at about 9 inches, through an Eastman teller magnifying glass, through 1 inch f 3.5 lens set at infinity. This makes an ordinary dental X-ray film, (a little larger than a postage stamp) nearly fill the screen, greatly magnifying it, of course. This could also be done at about 3½ feet with the telephoto lens.

A natural color process surgical picture would be per-



First portable sound equipment sold from Hollywood for foreign use

hips more spectacular, but for exhibition to those at all familiar with such they recognize 'black' blood as such, except that the flesh is 'flesh color' and instruments are mostly 'steel color' although they do not so appear in the black and white picture.

However, now that there is a possibility of a color process that will permit telephoto lenses and pictures with less than bright day-light, surgical pictures in colors taken from practicable filming distances with telephotos giving sufficiently large details, using regular pan film and permitting duplication, I understand are quite feasible.



Story—Human Interest—Action . . .

Continued from Page 37

cameras, objects moving directly across the screen relatively close to the camera are almost always blurred.

In making pictures of football games—as all of us, professional and amateur, are doing these days—it is better to shoot long shots than to try for close-ups. The average man in the stands should hardly ever try to use more than a two inch lens, unless his seat is very high up in the stadium, then a three might be all right. Using lenses of longer focal length, it is, of course, possible to get individual shots of some particular player who stands out, but in doing so, we fail to get the action in true relationship to the game itself. A few figures fill the frame completely, a few strides, and they are out of the picture—leaving us no idea at all of the play itself. It is, of course, possible to follow some plays in telephoto shots, but, due to the wide shutter aperture with its inevitable blurring of fast motion, and to the inevitable inaccuracy of finds with such lenses, such follow-shots are seldom satisfactory. Therefore the best plan is to use a lens that will give us a complete picture of the two teams as they line up for scrimmage. Of course, the style of play will make some difference: if the game is running chiefly to line plays and close runs around the ends, we can use longer focal lenses than would be wise if the play ran more to wide runs, passes and kicking. To my mind, the best results are obtained from using a turret-equipped camera, with a one inch and a two inch lens, both set at infinity, and alternating the two objectives as the play dictates.

Slow-motion is always useful in sports pictures—especially such fast-moving sports as football and hockey. But running the camera at the speeds necessary to get the maximum slow-motion effect uses up a lot of film, so a very practical expedient is to compromise, using only a moderately fast taking speed—say 36 frames per second, and then get the rest by projecting them with the projector running well below normal speed.

In photographing football games in a large stadium, it is a good idea to bring two kinds of film: the cheaper Panchromatic for the early part of the game, and Super-sensitive for use later, when the field is largely in deep shade. Also, if you want to make a complete record of the game, you'd better use two cameras, and have a friend with you to load one while you shoot with the other. Also, if you want a complete story, get a few shots of the crowd—long-shots of the stadium itself, and if you can get them) closer "candid camera" shots of the spectators. And don't forget the roosting-section stunts between the halves!

In shooting other events that are more definitely pictures of an individual, get as close a shot as is possible. "Frame" your shot as you would a still picture, with the figure close to the center of the picture. If possible, have your actor against a background that has something to do with either the character or the action.

Don't have your personage merely stand and smile. Have him doing something—even if it is only talking. If this last is the case, give him a foil with whom to work—

someone else to stand in the picture, with whom he can be talking. Usually three-quarter shots of people are best, but no matter what angle you use, have your man or woman doing something definite. Some poses of celebrities in the old newreels lack only a row of numbers on the chest to look exactly like actors' gallery pictures.

News stories must have human appeal, even if they are shots of celebrities. There is more human appeal about a fellow if he is doing something—especially if he is shown in lively, natural conversation with somebody. If you photograph someone merely standing still and smiling embarrassedly, you might as well tack up a still picture of him and shoot that.

If you plan to show the size of any object, or a picture of its detail, pan slowly, and not too long. Sometimes it takes good judgment to decide when to stop, but you can always be sure that the picture will be better short, even if it doesn't cover quite everything.

Everyone knows when to begin photographing a scene—but it is often harder to know when to stop, a good rule to follow is to stop the camera when the action has progressed far enough to let the audience know what has happened. Many pieces of action can be left uncompleted on the screen provided enough is shown to give a clear idea of the nature of the action. Sometimes, on the other hand, it is necessary to make a complete record. In doing this, let the picture run long, but give it variety by frequent changes of angle.

It is a good policy to study the technique of the different newreel cameramen and editors closely when you go to the theatre. You will find that some editors prefer to have their subjects run longer than do others, while some will inevitably cut their scenes and subjects short. The latter, I think, makes for the best newreel technique, as it keeps the thing moving faster, and shifts to another subject before the audience has had time to become bored with the first one. There is a knack, too, to arranging the different stories that go to make up a newreel issue. As a rule, it is best to open up the reel with some subject of especially timely news-interest, and to finish it with something that has a minimum of physical action. It is also often a good idea to scatter a few short "flashes from here and there" in the middle of the reel—sometimes these may be just one or two scenes of some unusually interesting person or event, stories that can't stand overly detailed exposition but which, if kept short, are interesting.

If new news films are an excellent means of keeping up interest and activity in an amateur movie club while more pretentious productions are prepared. The different members can be assigned to "cover" certain events of local or club interest, and the whole cut together as a two or three hundred foot subject to be shown at club meetings. This will enable the members to improve their photographic technique, and give them, as well, the feeling that they are doing something for the good of the club.

But to return to the purely personal news film: you can always pep up your home programs with such pictures. Usually, you can be sure that your audience will be less interested in your personal films than you are. This applies to all but the most exceptional of news subjects as well; therefore they will welcome short shots and frequent changes of subject-matter. You will notice how frequently I stress the subject of short shots and variety of subject-matter, this is what creates interest in the professional newreel—and it can do no less in the amateur one. A circus prospers because it provides entertainment for a wide variety of tastes, the newreel is the circus of the movies. In the professional theatre, some patrons prefer Greta Garbo and some prefer Tom Mix—but everyone likes to see the newreel.

It is the same with home movie audiences—so pep up your programs with your own newreels!

Oriental to Order

Continued from Page 15

cap he would later don... and to represent the forehead of the old-school Chinaman. The last steps, of course, were the usual ones of applying grease-paint and powder—in this instance, a special blend created in the M-G-M makeup laboratory and which gives exactly the proper coloring to both look and photograph like the skin of an oriental. The application of this makeup required more than three hours of the hardest and most exacting work on the part of the makeup man—and no little discomfort on the part of Mr. Karloff. Such character makeup is certainly no game for amateurs!

In some instances, of course, we do not have to go to so much trouble to make our players up into orientals. With Myrna Loy, for example, who played Karloff's daughter in the same production, the task was far simpler. Miss Loy has a somewhat oriental cast of features to begin with, therefore, all that was necessary was to apply the inevitable tapes under the hair, to draw the eyes and eyebrows slightly upward, to elongate the eyes with the use of kring pencils, to similarly alter the contour of the eyebrows a trifle, to make the lips up somewhat fuller than would be necessary for a European characterization, and to apply the special Chinese-blend grease-paint and powder. Add a Chinese costume and coiffure—and you have a perfect Chinese girl!

In both of these personae—as in every picture, whether it requires character makeup or no—the ultimate and most important factor is the cinematographer. The makeup man and the cinematographer must always work very closely together, most of all if the picture, as this one did, depends to any great extent upon character makeup. On "The Mask of Fu Manchu," we were extremely fortunate in having Gaetano Gaudio, A. S. C. (otherwise "Tony") in charge of the camera work. His ability to secure beautiful photography, without introducing any elements which would tend to dispel the effect of the makeup, meant the difference between success and failure to both Mr. Karloff and the makeup department. Moreover, Mr. Gaudio's willingness to cooperate with us in preparing the makeup as well as in the actual production of the picture was of incalculable value to us all. For in the long run, the success or failure of a picture which, like this one, involves so much in the way of unusual character makeup, is determined in advance by the relations existing between the makeup artist and the cinematographer. When they understand each other's aims and problems, and can cooperate as perfectly as was the case here, they can, between them, do the impossible.

W. J. (Bill) German Visits Hollywood

For the first time since he introduced the new Eastman super sensitive panchromatic negative in February 1931, William J. (Bill) German, vice-president and general manager of J. E. Bayliss, Inc., of New York visited Hollywood last month.

While in Hollywood he was among the executives represented during the judging of the 16 mm. pictures in the contest which was conducted for the past year by the Society of American Cinematographers.

In expressing his amazement at the photographic results achieved by some of the amateurs, he requested permission of the Society to take several of the outstanding photographic pictures back with him to Rochester to show to the executives of the Eastman Kodak Company.

Highlights of Amateur Contest

Continued from Page 20

these figures, one is tempted to recommend that a special award be given to the individuals who had to wade through this mass of computations.

Another palm should go to the members of the A.S.C. who served on the various sub-committees handling the preliminary judging. These committees reviewed from twenty-five to fifty pictures per day for a period of over six weeks. That ladies and gentlemen, is work! But it proved thrilling work, for one never knew what the next picture would be—it might prove a potboiler or a masterpiece. The surprise, as the fellow remarked to the hangman, was terrific.

The ladies were well represented among the entrants, especially with the superb nature-studies of Margaret Bodine and the interesting film-reportage of Ruth Rodgers. Both youth and age were represented; one contestant admitted that his films were made during his 72d summer, while another entered a playlet in the making of which no one over 16 had participated.

As one of the more ultra-impressionistic films was projected, Clarence Brown was overheard to remark, amid a series of weird angle-shots, "Maybe I'm wrong, but a crooked camera is still a crooked camera to me!" And a few moments later, as some of the impressive scenery of Catalonia was shown, "Lucky devil—think how far we'd have to travel to find locations like that!"



The Third Girl

AND the grip of preparation for the Christmas season won't you pause a moment to pay the "third girl"? Among all young women who dot between the ages of 13 and 30 one out of three dies of tuberculosis—a human sacrifice to ignorance and indifference. Tuberculosis is preventable and curable. Turn your prayer into action and buy Christmas Seals. Your pennies help spread the knowledge that will save lives.



THE NATIONAL, STATE AND LOCAL
TUBERCULOSIS ASSOCIATIONS
OF THE UNITED STATES

BUY CHRISTMAS SEALS

Color in Motion Picture Advertising

Continued from Page 30

playlets and are serviced direct to the theatres showing them and are shown as a single unit at one place on the program. This limiting of the number of ads shown on a program has a twofold effect, one is to render the presence of advertising on the program entirely unobjectionable to the audience and the other is upon the value of this showing to the individual advertiser, the individual ad is not submerged in a mass of other advertisements to the point where his ad is not remembered.

Now we come to the point where the reason should be given for producing screen broadcasts in technicolor. First, most articles of merchandise today are highly colored and to try to create a desire for them by presenting them in black and white, left much to be desired. The appeal of color is universal. Second, the use of color ties right in with the present vogue of color in most national advertising campaigns in other mediums and leaves nothing to be desired on the part of the advertiser, as the identification of his product may be as much by color as by illustration. Third, the color photography of today has been brought to a state of perfection where the realism of the scenes as well as individual articles shown in them enhances the entire program on which they appear and make of them a bright and interesting spot in any program.

Now let us step behind the scenes and follow the actual production of screen broadcasts from their inception as ideas to be made into scenarios.

The campaign that this particular firm is preparing for release must be adapted for the screen in much the same manner that a novel has to be revised and otherwise adapted for the screen, and for much the same reasons. Obviously all the reading matter of a newspaper ad cannot be shown, but by careful thought and planning the same story can be told, by combining action, voice and sound. After the series of films, or playlets as we term them have been completed in scenario form the story that each one of them tells is sketched as a series of illustrations representing each scene in continuity and with the voice or sound that is to accompany each playlet typewritten in the margin down one side of the sheet and sent to the advertiser for approval before starting production.

Simultaneously with the submission of sketches of the film to the advertiser, the sets that will be required for the production of the films are designed and filed to be ready when the approved scenarios reach the production department. Upon receipt of the approved scenarios the sets required are constructed and arranged and after selection of the cast and assembling various props the actual shooting starts.

Many of the scenes are double or multiple exposures and most scenes dissolve together. Now inasmuch as the effects and tricks that are practiced in black and white cinematography by means of after treatment and making duplicate negatives by means of an optical printer are of necessity done in the camera, considerable rehearsal and careful timing are necessary to get just the parts of the action that tell the story in exactly the predetermined amount of footage. All this calls for patience and most careful timing of camera and action and at the same time careful balancing of lighting and exposure so that the finished composite scenes which sometimes combine exteriors made in brilliant sunlight with mazda lit interiors will all appear with the same contrast and density and colors remain unchanged in the combined scenes.

Because of the particular methods necessarily involved in making a film of this type, recording of sound must be done after the film is completed by synchronizing projector and recorder and rehearsing till sound and picture are perfectly synchronized then recording continuously through the several scenes in each playlet. Other methods are to record

while shooting and dub in certain effects by re-recording. Of further interest may be the number of "servicized" playlets made in our studio, for in addition to the special films made for national advertisers there are a large number of playlets made for a number of standardized lines of business and these are served in the same manner than the special films are.

We make films for 29 lines of business in series of 52 films for each line per year which makes a total of 1508 playlets in color each year. The production of these films differs from the specials for national or regional distribution in no way except that the name of each dealer or merchant is a separate trailer and added to each film before assembling the reels to be shipped to the various theatres.



Riddle Me This

Continued from Page 13

capable of doing far finer work than the present standard of story quality permits. To my mind, the art of cinematography, although it has reached a very high standard, is still far from its zenith, but it cannot progress much farther until better, more suitable stories are put before the camera.

"I do not, however, feel that the art of cinematography itself will be any different in 1942. Art is changeless; what is good art today will still be good art tomorrow. A painting by Rembrandt, who lived three hundred years ago, is still esteemed as a masterpiece today; the photographs that David O. Hill made a century ago are still rated among the finest examples of photographic portraiture extant. Similarly, if the cinematographic art which we are pursuing today is truly art, it will be equally satisfactory—technical or mechanical considerations being ignored—ten years from now. In the same way, the films of ten years from now should not be greatly different in so far as cinematic artistry is concerned, from those of today. Materials will undoubtedly be improved and equipment bettered—perhaps revolutionized—but the basic principles of cinematic art as we now know them will undergo no change. How fully we will be able to utilize the possibilities of our art must depend, however, not so much upon the cinematographers themselves, but upon those who dictate and prepare the material that is given them to photograph."



Chicago Club to Film Exposition

THE highlight of the Chicago Cine Club 1933 activities will be the filming of the Progress Exposition to be held in that city. This event will be covered by the club members, each being assigned certain duties.

In October this club had its annual election of officers. Glenn Steele Bowstead was elected president, Stanley J. Warner, vice-president, Warren R. Sandage, treasurer, William Macomber, secretary. The program committee consists of Geo. J. Cowan, D. R. Furness, E. J. Hamme and S. E. Butler, Finance Committee, G. R. Tuttle and H. W. Clark, Membership committee, Stanley F. Warner, G. J. Cowan, L. E. Weaver, W. R. Sandage, Film Committee, A. L. Bartlett, H. W. Clark, D. R. Furness, Education Committee, H. C. Unger, C. A. Paulson, Dr. O. Nugent, House Committee, L. Ryssy and M. R. Richmond, Award and Contest Committee, J. A. Mutter, Jr., R. W. E. Yardley, W. A. Scott, Publicity, Herman J. Phelps, Directors Phelps, Paulson, Bartlett.

Under the guidance of President Bowstead an active and ambitious program has been outlined. The main bit of work will be the filming in all of its detail the Progress Exposition by the club which will be in the nature of an historic record of this event.

Secretary Macomber announces the club has a film for loan to responsible clubs, titled "Chicago." Address W. W. Macomber, 11112 Merchandise Mart, Chicago, Ill.



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Thus the Lens of the Crime

Continued from Page 3

camera strictly as a means of story-telling; not (as so many directors are wont to do) as a bit of cheap directional pyrotechnics. Unlike many mystery and horror films that have been released lately, there is no forced striving for effect, either dramatic or comic; therefore the melodrama of "The Mummy" is doubly powerful, since it is natural. Despite the somewhat improbable story, revolving around a revived mummy, and its sinister occult influence upon the characters, the picture is excellent entertainment, and does not leave an unpleasant taste in one's mouth.

Charles Sumar's photography is of an equally high order, and evidences the possibilities latent in the cooperation of a great cinematographer-director and an outstanding cinematographer. In no part of the picture is there any suggestion of the slightest lack of perfect understanding and cooperation between the man at the camera and the director; no suggestion (as there is so often in other films) of the one forcing the other to do unwise things, or the other attempting to conceal the inability of his fellow. In a word, "The Mummy" shows two fine artists working together with perfect understanding.

Photographically, the picture is excellent; it is probably the best work that Sumar has done in some time. Many of the sequences require unusual effect lightings, which he has handled with unusual skill. He has not hesitated to occasionally sacrifice face-lighting when the scene required it. Neither has Sumar indulged in an orgy of exaggerated, ultra-low-key effects merely because he was handling a horror-film.

The process work—of which there was considerable—is excellent. The sets, designed by Willy Pogany, are also far above the average. The editing of certain parts of the film, however, might be improved, as some of the transitions between the sequences were so abrupt as to cause some confusion. Likewise, it is unfortunate that Universal chose to preview a rather light working-print to the press. Such a policy is unfair to both cinematographer and director—and, in fact, to everyone connected with the production—for the average reviewer is not a technician, and can rarely make allowance for the unavoidably poor quality of a working print; on some occasions the print is in so unfinished a condition that even experienced reviewers can get no clear idea of the technique of the finished picture. Previewing working prints to the press is a policy that everyone in the industry should discourage, for all suffer from it.

It's Not Just the Camera

Continued from Page 35

negative, and make your print light—literally turning night into day for you.

If you have a multiple-speed camera, like a 70-D Filmo or a Model S Victor, you can do a great deal "in speed." Of course, I suppose every amateur knows if he is shooting, say, a football game in high-speed (slow-motion), he can save film and get the desired effect by shooting at only a moderately high speed—32 instead of 64—and then projecting with the projector running well below normal speed. But there are more than merely "half," "normal" and "super-speed" movements on most such cameras; by using the intermediate speeds you can get a wide range of dramatic and comedy effects without the abnormal appearance you get with the extreme fast and slow speeds. Working "in speed" was half the secret of the success of many pictures—both comedies and features—of the silent days.

But, remember that it isn't what you have to work with, nor even what you do; it's how you do it, that counts. Whether it's "Rhapsody" or "It's a First Step," it's the brain of the man behind the camera that makes it a good picture—or a bad one.

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<i>King of the Jungle</i> <i>Mr. Mix of New Orleans</i> <i>The Show Man Wins</i> <i>Queen of the Air</i> <i>Mysterious Rider</i> <i>Luxury Liner</i> <i>The Queen Was in the Parlor</i>	H. BRUCE HUMBERSTONE WESLEY RUGGLES LOWELL SHERMAN WILLIAM A. SEITZ HENRY HATHAWAY LOTHAR MINDES STUART WALKER	ERNEST HALLER, A.S.C. LEO TOWER CHARLES LANG, A.S.C. CLIBERT WARRENTON, A.S.C. ARCHIE STOUT VICTOR MEAR, A.S.C. KARL STRUSS, A.S.C.	HARRY MILLS EARL REYMAN HARRY LINDGREN J. E. GOODRICH IRVIN KERR M. M. PAGGI HAROLD LEWIS
R-K-O STUDIO—William Eggleston, Camera Executive			
<i>The Fast of Mary Helene</i> <i>Reveries for Hire</i>	SLAVKO VOKRAPICH and HARLAN THOMPSON RALPH INCE	CHARLES ROSHER, A.S.C. ROY PRUNT	HUGH HODDOWELL E. A. WOLCOTT
UNIVERSAL STUDIO—Charles Glawson, Camera Executive			
<i>Destination Unknown</i> <i>Private Jones</i> <i>The Big Cage</i>	TAY GARNETT RUSSELL MACK KURT NEUMANN	EDWARD SNYDER, A.S.C. CHARLES STUMER, A.S.C. GEORGE ROBINSON	JOE LAPIS ROBERT PRITCHARD WM. HEDGECOCK
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<i>Secrets</i> <i>The Mosquerader</i>	FRANK BORZAGE RICHARD WALLACE	RAY JUNE, A.S.C. GREGG TOLAND	FRANK MAHER OSCAR LANCERSTROM
WARNER BROS.—FIRST NATIONAL STUDIO, Milton Cohen, Camera Executive			
<i>Mad Reader</i> <i>Blue Moon Murder</i> <i>Grand Central Alibi</i> <i>The King's Vacation</i> <i>The Sucker</i>	ROY DEL RUTH ROBERT FLOREY WILLIAM WELLMAN JOHN ADOLFI ARCHIE MAYO	SOL POLITO, A.S.C. ARTHUR TODD SID HICKOX JAMES VAN TREES, A.S.C. ARTHUR EDSON, A.S.C.	ADOLPH THOMAS C. A. RIGG R. B. LEE E. A. BROWN OLIVER GARRETTSON

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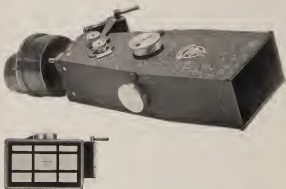
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